DOCUMENT RESUME

ED 203 997 PS 012 222

AUTHOR	Hassenpflug, Anna M.
TITLE	The Use and Understanding of School Time by Third Graders: An Ethnographic Case Study. Report from the Project on Studies of Administration and Organization for Instruction.
INSTITUTION	Wisconsin Univ., Madison. Research and Development Center for Individualized Schooling.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
REPORT NO	WRDCIS-TR-574
PUB DATE	May 81
GRANT	OB-NIE-G-81-0009
NOTE	361p.: Form on page 340 of original document will not reproduce clearly.
EDRS PRICE	MF01/PC15 Plus Postage.
DESCRIPTORS	Behavior Patterns: Classroom Research: *Educational Administration: *Educational Strategies: *Elementary School Students: Ethnography: Friendship: Grade 3: Primary Education: *Scheduling: Teacher Influence: *Time Factors (Learning): *Time Perspective: Use Studies
IDENTIFIERS	Time on Task: *Time Utilization

ABSTRACT

The major purposes of this study were to determine how individual third graders use and understand school time, to ascertain what relationships exist between their use and perception of school time, and to generate conclusions about third graders' use and understanding of school time that would be relevant for educational administrators and teachers in allocating school time as an educational resource. Data for the study were gathered from observations, interviews, and school records of 43 third graders in two ability-grouped units at one of four schools involved in the Resource Utilization Project of the Wisconsin Research and Development Center. The researcher spent 51 days during the 1979-80 school year observing students at the research site. Both qualitative and quantitative methods were used in analyzing the data. Results are discussed in terms of six categories: (1) formal administrative constraints on scheduling of student time: (2) the actual use and control of student time by administration and faculty: (3) actual use and control of time by students themselves: (4) the actual use and control of student time by students and/or administration and faculty: (5) student perception of blocks of school time and control of school time: and (6) the relationship between friendship patterns and school time usage. (Author/RH)

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Technical Report No. 574

THE USE AND UNDERSTANDING OF SCHOOL TIME BY THIRD GRADERS: AN ETHNOGRAPHIC CASE STUDY

by

Anna M. Hassenpflug

Report from the Project on
Studies of Administration and Organization for Instruction

Richard A. Rossmiller and Lloyd E. Frohreich
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Madison, Wisconsin

May 1981

This Technical Report is a doctoral dissertation reporting research supported by the Wisconsin Research and Development Center for Individualized Schooling. Since it has been approved by a University Examining Committee, it has not been reviewed by the Center. It is published by the Center as a record of some of the Center's activities and as a service to the student. The bound original is in the University of Wisconsin Memorial Library.

The project presented or reported herein was performed pursuant to a grant from the National Institute of Education, Department of Education. However, the opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education, and no official endorsement by the National Institute of Education should be inferred.

Center Grant No. OB-NIE-G-81-0009

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ACKNOWLEDGMENTS

I wish to express appreciation to all those who have provided assistance in the preparation of this manuscript.

Very special gratitude goes to my advisor and friend, Professor Richard Rossmiller, for his instructive and enlightening aid during the course of researching and writing the manuscript.

I wish also to thank Professors Lloyd Frohreich, James Lipham, Richard Ruiz, and Robert Tabachnick for their time and help as members of my committee.

Much appreciation must further be expressed to Drs. George and Louise Spindler who first provided me with an understanding of ethnography and to Drs. Gary Lindle and George Macrides who offered helpful suggestions about relevant statistical procedures and organizational design for the manuscript.

I wish also to thank the Wisconsin Research and Development Center for Individualized Schooling for its financial support of this research and Elvira Benter for her expertise in preparing the final manuscript.

Much gratitude must be extended to the 43 delightful third graders and their teachers and principal without whose cooperation this research would not have been possible. I especially thank the teachers for their friendship and for their cheerful tolerance of my prolonged observations of their classes.

Finally, I wish to thank my parents and my friends for their encouragement throughout the period of research and writing of the manuscript.

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Abstract

THE USE AND UNDERSTANDING OF SCHOOL TIME BY THIRD GRADERS: AN ETHNOGRAPHIC CASE STUDY

Anna Marie Hassenpflug

Under the Supervision of Professor Richard A. Rossmiller

The major purposes of this study were to determine how individual third graders use and understand school time, to ascertain what relationships exist between their use and perception of school time, and to generate conclusions about third graders' use and understanding of school time that would be relevant for educational administrators and teachers in allocating school time as an educational resource.

Data for the study were gathered from observations, interviews, and school records of 43 third graders in two ability-grouped units at one of four schools involved in the Resource Utilization Project of the Wisconsin Research and Development Center. The researcher spent 51 days during the 1979-80 school year observing students at the research site. Both qualitative and quantitative methods were used in analyzing the data as befits an ethnographic case study.

Concerning formal administrative and faculty constraints on scheduling of student time, it was found that decisions regarding time allocation were made at three levels: district, school/unit,

and classroom. Subjects offered, their daily order of occurrence, and the allocation of time to specific instructional and noninstructional activities varied between the primary (lower ability) and intermediate (higher ability) units. Noninstructional time accounted for nearly one-third of the total time available in the school week. Most primary unit third graders received fewer scheduled minutes of reading and mathematics per week than did those in the intermediate unit.

Findings pertaining to the actual use and control of student time by administration and faculty showed that despite substantial variations in the time actually allotted a subject each day, most students received at least 80 percent of the scheduled instructional time in each subject. Approximately three-fourths of the time in class was devoted to instructional activities and one-fourth to noninstructional activities. The largest percentage of instructional time for all subjects and all students was spent in independent work and in large-group instruction, although the use of time in individual subjects varied.

With regard to the actual use and control of time by students themselves, there were only two ways--off-task behavior and absence--in which a third grader could control the allotted time during the school day. The mean percentage of off-task time for third graders was relatively low and was greater in academic subjects than in special subjects (art, music, etc.). Neither the length of academic classes, total achievement test scores, nor IQ scores showed much correlation with the percentage of student time off-task in subject areas.

Concerning the actual use and control of student time by students and/or administration and faculty, it was found that recess and free time were the two portions of the day during which student time might be controlled by either adults or students.

Findings about student perception of blocks of school time and control of school time revealed that neither the order and names of months nor the precise length of the school year were fixed in the minds in these third graders. There was a substantial difference in the accuracy with which third graders could describe their daily schedule, and most of them could not give the specific times when various classes began and ended.

With regard to the relation between friendship patterns and school time usage, it was found that third graders believed they worked at about the same speed as their friends. The most popular children in each unit had achievement and IQ test scores that were close to or below the mean for third graders and their off-task time approximated the mean for their unit.

APPROVED: Richard A. Rossmiller

DATE: March 19, 1981

CHAPTER I. INTRODUCTION

Background of the Study

The past two decades have been a time of questioning with regard to just what it is that goes on in schools and whether schools really do make a difference in the social and academic growth of individual children. Researchers began trying to provide data needed by policy makers and administrators to determine how to allocate resources equitably within and among school districts and schools. Studies such as that of Thomas (1977) revealed that fiscal equalization was not improving individual student achievement, indicating that achievement must be the result of other factors. If public school systems are to provide the most appropriate education for all children, then factors which affect achievement need to be found. These would help policy makers in planning and organizing schools in which children can and do achieve according to their potential.

One significant approach to this issue has been to study the allocation of time across and within school systems. In Carroll's (1963) model of school learning, time is regarded as a central variable in school learning, for students vary in the amount of time they need to master certain skills. There have been both macro- and micro-level archival studies to ascertain differences in length of school day and year, allotment of time to subjects, and student attendance (Summers & Wolfe, 1975; Murnane, 1975). Other research has concentrated on the teacher's use and organization of time during the school day (Brophy & Evertson, 1976). The individual student's day also has been referred to by researchers, but generally only as background for classroom interaction studies or studies of schools and classrooms as social systems. Such research has not dealt with variations in time allocation among subjects. Several researchers (Cusick, 1973; Jackson, 1968), however, have suggested that detailed study of the use of student time would contribute to a more complete understanding of exactly what happens to the individual in school.

The study of student time is valuable, not just from the individual perspective, but from a societal one as well. If educational administrators are concerned with the allocation and distribution of resources, then student time as a resource becomes an extremely important component in the management of the educational process. Student time, in itself, is a nonpurchased resource, but it is an economic resource, nonetheless; management of student time involves policy decisions about the number and types of school personnel to be hired and how they are to be deployed to make the best use of student time, the amount of equipment to purchase, and the type of school facilities to be constructed. The quantity and quality of a student's time in school also has consequences for the individual's ultimate earning opportunities as a member of the labor force.

In September, 1979, the Resource Utilization Project of the Wisconsin Research and Development Center for Individualized Schooling began a three-year study of time allocation of approximately 250 students who were then third graders in four schools located in four separate Wisconsin communities. The study will be completed in 1982. The framework for the Resource Utilization Project is based on the model of the educational production process devised by Rossmiller and Geske (1977). According to their model, educational systems consist of our major components: (1) the system environment and controls, (2) the school system itself including the human and material resource inputs, (3) the outputs of schooling, and (4) feedback from the evaluation of the outputs.

The project is concerned primarily with the relationship between gains in reading and mathematics achievement scores and the student's use of time in these two subject areas. Data obtained from classroom observations are recorded on forms which categorize student activity according to how much classroom time is spent by individual students in instructional and noninstructional behavior. The former is broken into five categories and the latter into three. Data collection is primarily quantitative in approach and in outcomes to be analyzed.

This researcher selected one of the Individually Guided Education (IGE) elementary schools involved in the project as the site for an ethnographic study. Ethnography affords a useful approach to gathering and analyzing data about classroom activity. Ethnography provides both a quantitative and qualitative orientation to the study of human activity and is used most often by anthropologists. This method, however, is being used increasingly in studies of schooling. It provides richer and more detailed information than can be obtained from studies based solely on instrumentation. The ethnographer observes and records behavior and interviews the people who have been observed to determine their understanding of what their behavior meant to them and why they behaved as they did. The ethnographic researcher can also use available archival information to gain further insight concerning the behavior of individuals and groups. What emerges from such an in-depth study is both a quantitative and qualitative account of the behavior of individuals and the particular group(s) to which they belong.

Ethnography of schooling has previously been used mainly to study social interaction in classrooms or individual teachers' behaviors and has not been applied to individual students apart from studies of teachers, other students, or school culture. Furthermore, ethnography has not been applied to the specific topic of students' use and understanding of time in school and its relation to other aspects of the individual students' school experiences. The knowledge gained from a case study conducted in one elementary school should be of use to administrators and teachers as they plan for the instruction that takes place in similar schools.

Statement of the Problem

The question of how third-grade students use their school time, both in the course of a school day and a school year, and why they use it as they do was examined through an ethnographic case study of third graders in one Wisconsin IGE elementary school. The research also sought to determine individual variations in the use of school time and possible factors such as personal characteristics and the child's perception of time spent in school which might play a part in causing the variations.

Review of the Literature

Three areas of research were especially relevant for this particular ethnographic case study: time and learning studies, ethnography of schooling, and research on children's understanding of time.

Time and Learning

Foshay (1973) believed that the way most school time is scheduled today is based on ritual and tradition inherited from

America's days as an agricultural society rather than being based on current knowledge about learning. Carroll's (1963) model of school learning affirmed the importance of time as a central variable in differences in student learning. According to this model, the degree of learning is a result of the congruence between the amount of time actually spent and the amount of time needed to learn. Bloom's (1974) mastery learning process made use of this concept and further regarded general intelligence or aptitude tests as predictive of the amount of time the individual student will actually need to complete a task.

There have been studies of both the correlation of time allocation with general achievement and with specific subject achievement by students. Jarvis' (1963) findings that class periods of at least 55 minutes in length in elementary school arithmetic resulted in significant gains in arithmetic achievement for all ability levels substantiated the findings of previous limited research (Daughtery, 1955; Denny, 1955; Phillips, 1962) in this area.

Wiley and Harnischfeger (1973) concluded that the differences in quantity of hours of schooling correlated significantly with student achievement scores. Murnane's (1975) research on black students in 15 New Haven, Connecticut, elementary schools further supported the positive correlation between quantity of schooling and student achievement. Summers and Wolfe's study (1975) of Philadelphia schools revealed that all types of students at all grade levels scored higher on achievement tests the more days they were in school.

Brekke (1963), however, discovered in his study of over 1,000 United States schools that increased time allotments for basal reading instruction did not lead to improved reading achievement. Smith (1979) also expressed doubt about the value of increasing time allotments by subject in order to increase achievement in that subject, for she found only a slight relationship between time allocated by fifth-grade teachers for social studies instruction and achievement scores in social studies. Bloom (1974) and Thomas (1977) both favored more research at the classroom level to determine just how much time is necessary for completion of various learning tasks.

One source of disparity in time allocations has been differences in the amount of time that school districts have mandated for the length of the school year and the school day. In 1898, the average length of the school year in the United States was 143.1 days, but the range from high to low across states was up to 120 days per year. By 1974, the average length of the school year in the United States had increased to 178.7 days and the variation in length of the school year had narrowed to about 15 days (Kemmerer, 1978-79). However, differences in the length of school day have remained more pronounced. In 1928, Mann found differences of up to two hours in the length of the day. In 1963, Reuter found this was still true. In 1973, Wiley and Harnischfeger found a range from 710 to 1,150 hours in the amount of time students in Detroit schools were exposed to schooling.

There are further differences in the amount of time elementary children are exposed to particular subject areas. Mann (1928) found that among the 444 cities he studied, some allotted 12 times as much time for instruction in reading and four times as much time for instruction in mathematics as did others. In a survey of 64 metropolitan school systems, Jarvis (1963) found that 21 percent had definite, prescribed time allotments for each subject in grades 4, 5, and 6; 44 percent had approximate time allotments; 24 percent had only suggested approximate time allotments; 7 percent had allotment policies stated in terms of blocks of time per subject; and 4 percent had no recommended time allocation per subject.

Jackson and Stuteville (1968) found that the amount of time allotted for science in 21 elementary schools depended on the grade level with less time being considered sufficient in grades K-3 than in grades 4-6. Garner (1978) discovered that fifth-grade teachers in self-contained classrooms in New York City allocated 52 more minutes per week to mathematics than did fifth-grade teachers in departmentalized Connecticut classrooms.

The length of the school year and school day and the amount of time actually allocated to particular subjects do not reveal how much of that time is actually spent by the student on learning activities. Gump (1967) reported that third-grade teachers used 12 percent of class time for pupil movement into and out of the classroom. Grannis (1978) looked at the transition time and non-instructional time in nontraditional second grades and found that 9 to 13 percent of the time was spent on environmental maintenance.

There are very little data concerning how and for what reasons students themselves allocate their time to various activities while in school (Kemmerer, 1978-79). Douglas and Ross (1965) found little difference in daily school attendance among social classes before the age of nine in England. After that age, however, absences increased among children of the manual working classes in relation to other social classes. Stalling (1976) found that children in the first and third grades were absent more often in classrooms that emphasized large-group instruction and direct questioning with critical feedback.

Lahaderne (1967), who used direct observation in sixth-grade classrooms, concluded that there was very little relationship between measures of students' attitudes toward school and measures of attention in class. However, she did find positive correlations between a student's attention in class and performance on intelligence and achievement tests. Anderson (1973) reported that high-ability students spent more class time engaged in learning activities than did low-ability students.

Bloom (1974) reported that some students participate actively in learning as much as 90 percent of their time in school and that others participate actively as little as 50 percent of the time. Good and Beckerman (1978) found that sixth-grade pupils' involvement in learning activity declined when the teacher worked with the whole class and increased in teacher-led small-group work. Time on-task was less for low achievers than for high achievers. They theorized that some low achievers may be inattentive because inattention is a self-assigned reward, one of the few rewards within their grasp. The ongoing research of Thomas, Kemmerer, and Monk indicates that there are substantial differences among subjects, instructional formats, and SES categories in the percent of time students are on-task.

Additional research is needed to identify more precisely the variations among individuals' exposure to schooling and how their time in school is spent. It is at the level of the classroom and the individual student that time as a resource can be most productively studied because it is at this level that the interface between potential learner and the instruments of learning occurs (Rossmiller, 1979).

Ethnography of Schooling

Ethnography is increasingly advocated as an appropriate methodology for the study of what goes on in classrooms. The ethnographer can utilize the traditional instrumented approach of the symbolic interactionists (Flanders, 1970; Galloway, 1973) to record what is observed in the classroom and can also keep a narrative record qualitatively describing these observations. Furthermore, as a participant-observer the ethnographer is able to interview the people observed to compare observations with the individuals' perceptions of the observed events (McCall & Simmons, 1969; Becker & Geer, 1970; Riddle, 1966; Vidich, 1955).

An additional advantage of using ethnography in studying schooling (Wolcott, 1975; Wilson, 1977) is that the ethnographer can continue to elaborate the study if, while in the process of collecting data, unforeseen data and explanations emerge. Ethnography permits the constant reanalysis of data to shape the ongoing research and to suggest substantive theory (Glaser & Strauss, 1970). Cronbach (1975) declared null hypotheses dead and experimental methodology insufficient, and specifically called for more ethnographic studies. Campbell (1975) supported the use of case studies and suggested that they may be especially useful in the rejection of old theories as well as in the creation of new theories.

There has been a variety of approaches to the use of ethnography in studying schooling. One orientation has been to conduct research as a case study of a single school. Lacey (1970) examined a single British grammar school to develop an understanding of the school as a social system. Cusick's (1973) well known Inside High

School was an attempt to study what goes on in a school from the point of view of the different types of students present. Wolcott's (1973) shadowing of an elementary school principal's activities for a year provided a further unique contribution to the ethnography of schooling.

Another approach has been to look at what happens in classrooms. Jackson's (1968) perceptive and largely qualitative study of classroom life provided an overview of what goes on in elementary classrooms with emphasis on the repetitive, routinized, group-oriented, and compulsory aspects of classroom life. Smith and Geoffrey's (1968) study of a single urban classroom revealed discrepancies between the middle-class teacher's perception of events and those of a group of lower-class students. Nash's (1973) social interaction research in Britain revealed the existence of important links between friendship patterns and students' school behavior and self-concept as well as relationships between friendship patterns and the teacher's perception of the students.

Some recent studies have employed ethnography to examine how schools and teachers act as agents for the subtle transmission of a society's predominant value system. Sharp and Green (1977) analyzed social control mechanisms in three primary classrooms in a British school. Apple and King (1977) observed and interviewed kindergarten students to determine how children are socialized into the prevailing societal norms. Erickson and Mohatt (1977) examined differences in the social organization of participation structures in two classrooms of American Indian students. Spindler (1973) used the ethnographic method to study elementary classrooms in German villages with the specific purpose of discovering what happens in classrooms in an area undergoing rapid exposure to urbanization.

Ethnographic methods have also been used to analyze teaching practices. The Beginning Teacher Evaluation Study (BTES) (1973-74) used the Apple and Ramos behavioral classification system for classroom observation to investigate classroom and teacher characteristics that produced student achievement in reading and mathematics. The importance of the teacher's allocation of student time emerged in this research. Brophy and Evertson (1976) employed an ethnographic technique in the longitudinal study of elementary classrooms to determine characteristics of good teaching.

The classroom ethnographic approach has generally served either to alert educators to complex and less obvious aspects of classroom life or has focused on a particular social theme that, it was hoped, classroom research would help clarify. Although Barker and Wright's (1950) One Boy's Day provided an account of a child's in-school and out-of-school experiences, there have been no ethnographic studies which look both at groups' and individual students' use and understanding of school time.

Children's Understanding of Time

To produce an ethnographic study of the variations in the students' use of school time, it is vital to discover how third-grade students themselves perceive time, especially school time. Although research on children's understanding of time concepts suggests that children's grasp of time is defective, the defects and the reasons for the defects have been the subject of debate among researchers.

A major portion of the predominantly experimental psychological research suggests that the development of time concepts occurs along a maturational time line directly linked to a child's age. Oakden and Sturt (1922) concluded from their study of British children that development of the knowledge of conventional time occurs generally from about age four. The order in which time words were acquired depended on the frequency with which the particular words occurred in the child's activities. The ability to think of the past as different from the present generally does not appear before the age of eight. By the age of 8 to 10, most children were found to be able to name the year and at the age of 11 a rapid improvement in all types of time knowledge occurs.

Sturt's (1925) tests of a group of children aged 4 to 10 and another group aged 8 to 13 convinced her that it is not until around 10 years of age that the child has acquired enough of the concepts of time necessary for a study of history.

Hunter's studies (1934) suggested that although time concepts grow steadily from year to year, time concepts lag behind other concepts in development. In testing perceptual abilities of one group of children aged 10 to 14, he found time intervals filled by silent reading tended to be underestimated while shorter unfilled interludes tended to be overestimated.

Pistor's research (1939, 1940) provided further empirical support for the position which emphasizes the importance of maturational stages in the child's perception of time. He further suggested that the elementary social studies curriculum be reevaluated since children in grades 4, 5, and 6 generally have not developed the understanding of time concepts necessary for learning history and chronology.

Piaget's work (1937, 1946) is regarded as a major contribution to the maturational stage view. He suggested that time as a logical concept has two aspects: the order of successive events (before, after, at the same time) and the duration of intervals separating successive events. His developmental studies of children led him to hypothesize that there are six stages to the child's growth in the perception and understanding of time. The first five stages should occur by the time that child is one year old, but the sixth stage takes longer to develop fully. By the sixth stage the child is capable of recalling memories and begins to develop a chronology of the events in his world. Third graders would be in this final stage of development. Although Piaget established a basis for a gradual development of a sense of time in children, he did not present detailed analyses of how elementary school children of different ages understand time and how this understanding might affect their actions.

Maylan-Back (1946), in collaboration with Piaget, found three stages in the development of children's perception of time duration. Until 8 years of age, time seemed longer to children if more changing events took place in a time interval. Between 8 and 12 years of age, however, children replied that when the presentation speeds up, it takes less time. In the third stage, there tends to be a balance between these two types of responses.

K. C. Friedman's (1944) studies of children in kindergarten through sixth grade revealed that a kindergarten child knows the difference between night and day and between morning and afternoon, and that 85 percent can tell their age. It was not until the third grade, however, that they had grasped the concept of a year. Most primary children did not distingush between a long time ago and a short time ago. By sixth grade only two-thirds of the children knew indefinite terms like recent, eternal, and B. C.

Ames (1946) found a child distinguishes morning and afternoon by 4 years of age, can tell the day of the week by age 5, and can tell clock time by about 7 years of age. A child uses words such as wintertime and lunchtime before time, and today before in a few days. Fixed units of time like an hour and indefinite periods of time as long ago are difficult for a child to grasp. She concluded that the readiness to acquire and exercise these concepts depends "chiefly upon maturational factors and that there exists an underlying ground plan of growth, and a patterning process" (Ames, 1946, p. 122).

Lewin (1946) theorized that the maturation process involves the individual's development of increasing ability to incorporate greater spans of past and future into the psychological present. Bradley (1947) also ascertained the existence of order in the acquisition by 5- to 13-year-olds of time knowledge, organization of calendar months and the week, and the understanding of duration.

In accordance with the age-linked theoretical perspective on the child's developing understanding of time, Flickinger and Rehage (1949) suggested that concepts of time could be tested in six types of situations: (1) comprehension of the conventional system of reckoning time, (2) understanding time words of varying degrees of definiteness, (3) arranging a series of events in chronological order, (4) making and using time lines in school work, (5) detection of "time absurdities," and (6) making analogies based on time relationships.

McAulay's research (1961) supported the maturational stages approach, but he concluded that second-grade children have clearer understanding of the past than of the present and that they had a better understanding of the removed time environment than of the immediate and personal time environment. Periods of time were more clearly understood if pivoted about events rather than persons or places.

Studies of primary school children by Murray (1969) indicated that below 8 or 9 years of age, a child's concept of time is especially defective in perceiving the correct length of a time interval.

W. J. Friedman's (1977) study of children aged 4 to 10 showed increasing ability to represent a variety of temporal cycles as the children grew older. The advance in cyclic concepts occurred at about the same ages as previous researchers had indicated for substantial changes in logical time concepts and the understanding of conventional time systems. He found children are able to produce a correct order of the elements of a temporal cycle about two years earlier than they are able to distinguish permutations which preserve cyclic order from those which violate it.

Some researchers, however, do not accept the position of those who believe that chronological age sets tight limits on the development of the notion of time in children. Harrison (1934) concluded that the concepts of time develop in closer agreement with mental maturity than with chronological age and grade placement. Furthermore, some concepts of time are dependent on the growth of number meanings and relationships in the child's thinking. Buck (1946) and Farrell (1954) found a high positive correlation between scores on general intelligence tests and either the comprehension of vocabulary connected with time or the ability to solve time problems.

Springer's (1952) research on the general sequence of preschool children's development in learning to tell time suggested "a difference in understanding, ranging from immature animistic expressions to mature explanation comparable to those which an adult would give" (p. 95). Davis (1963) concluded that the limits supposedly imposed by maturation on the development of concepts of time and space might not be as rigid as earlier research suggested. In a test of comprehension of sentences using time connectives, Hatch (1972) discovered that both kindergarten and second-grade children responded most accurately to sentences representing temporal order and to and then/but first commands in contrast to before/after commands.

Goldstone and Goldfarb (1966) assumed that the failure to use and understand conventional time concepts reflects an inability to perceive time, i.e., to respond differently to different time intervals. Crowder and Hohle (1970) questioned this assumption and suggested instead that a child can discriminate time intervals at an age considerably earlier than he is able to demonstrate this capacity by verbally identifying conventional time units. Using empirical methodology, they found that by 7 years of age children have had sufficient learning experiences related to time estimation to use repeated observation of a standard interval to correct their own estimates.

In a study of 108 second, fourth, and sixth graders at one Wisconsin school, Tom (1966) found that significant differences in children's understanding of the notion of time occurred more frequently in relation to age than in relation to intellectual ability. Two years of age is more important in accounting for differences in elementary children's understanding of time than is a range of intelligence test scores of approximately 25 points. However, he concluded that the understanding of temporal notions may depend on a general ability or abilities not measured by general intelligence tests. In a study of fifth, eighth, and eleventh graders, Lessing (1968) concluded that although the sheer length of future time perspective is not highly significant, longer future perspective was always associated with higher intelligence, higher personality scores, higher academic achievement, and higher SES levels.

Levin (1977) presented a general model for the development of time concepts in children which suggests that although the child's conceptions of time are basically temporal, they are vulnerable to counter suggestions from various factors such as spatial variables. Levin suggested that two separate processes contribute to the acquisition of time concepts. The first is the understanding of duration and succession, and the second is the understanding of the relationship between duration and various forms of output such as speed and distance.

Riegel's (1970) studies of time perception among adults revealed that when recollecting the past, psychological, phenomenal time flows faster the closer the period of observation is to the observer. Units or cycles evident in recall of events are strongly determined by social regulations such as school ages, religious conventions, voting ages, promotion by seniority, and retirement. He urged further study of the perception of time rather than the external recoding of changes in the individual and in the society which most related research in developmental psychology has investigated.

Because of the degree of uncertainty which exists concerning the influences on the development of a child's understanding of time, more research in this area is necessary. Furthermore, aside from the few studies which suggested possible changes in the social studies curriculum to make it more relevant in terms of particular researchers' conclusions concerning children's understanding of time, none of the studies has considered the practical implications of their findings for the administration of schools.

Limitations of the Study

This was a case study of 43 third graders in one IGE elementary school in a small city in Wisconsin. The findings obviously are not readily generalizable to a larger population of third graders, but that was not the ultimate intent of the study. Rather, the study sought exact and detailed knowledge about individual variations in school time usage and in perceptions of school time among third graders within the context of a particular school.

Because of time constraints and costs, students could only be observed periodically throughout the school year rather than every day. Furthermore, because of the time limitations of a single researcher, all third graders could not be observed or interviewed on the same day, so some variation in time usage and interview responses may have been a function of the day or time of year when the interview occurred. It is hoped that the scheduling of five separate observations of each third grader and follow-up interviews of students interviewed early in the study minimized this limitation.

An additional limitation is that the researcher was viewing the student's use of school time from a microcosmic perspective limited mostly to in-school contextual variables which can be gathered from observations, interviews, and student records rather than viewing the student's behavior from a macrocosmic perspective which would have included out-of-school variables related to home, family, and community.

Significance of the Study

A clearer picture of time as a resource should emerge from looking closely at third-grade students' use of school time and their understanding of it, and from examining the relationship between this information and characteristics of the individual student and his/her experience during the course of a school day and year. Hypotheses about students' use of school time and their understanding of time were developed as a product of this research. These hypotheses should be important for school administrators who can exercise some control over the management of time, yet whose scheduling designs may not be reliable guides to the way the individual child actually uses the time spent in school.

The ethnographer is able to study a third grader's day in a way virtually impossible for an administrator or a teacher. The functions of these adults within the school or school system preclude lengthy periods of noninteractive observation of classrooms and students. The knowledge gained from such observation of a particular student's use of time revealed what is actually happening to that student in school, not what administrators and teachers think should be happening. Furthermore, there is no one adult in the school who sees a student throughout the entire day. The ethnographer, however, is able to do this and so can provide a picture of the school day in a way somewhat consistent with the way the student experiences it.

A further important aspect of this ethnographic study is that it places more value on the view of the school possessed by its real clientele--the students--than can most traditional research techniques which generally look at administrative questions and issues from the point of view of the adults involved in schools. Students can provide a great deal of insight into why and how some classrooms and some students function well and others do not. Nevertheless, students are seldom asked for their views about what happens in school, although it is important that they should be asked since their relation to the school is different from that of the adults employed in the school and from that of their parents.

Overview of the Study

This chapter presented the theoretical background for the study as well as a statement of the problem and the significance and limitations of the study. Chapter II presents a description of the research design and methodology used in collecting and analyzing the data. Chapters III and IV include the presentation and analysis of the data. Chapter V summarizes the findings and conclusions and suggests their implications for theory, practice, and future research.

CHAPTER II. DESIGN AND METHODOLOGY

Design of the Study

This chapter explains the design and methodology used in this study. It specifically describes the design of the study, the population, the instrumentation, the data collection procedures, and the ethnographic approach to data analysis.

An ethnographic case study was chosen as the means to examine third graders' use and understanding of school time. Rather than focusing solely on quantitative evidence derived from the "psycho-statistical" model (Lutz & Ramsey, 1973), ethnography allows an observer to gather qualitative data by direct observation and contact with the subjects of the study. It allows the researcher access to the research subjects' behavior and their thoughts relevant to this behavior, as well as the contextual setting of the subjects. Ethnography provides both a method for data collection and for ongoing analysis of those data. Constant, reflective analysis creates and shapes additional questions and hypotheses which the researcher then uses as guidelines for further observations and interviews of individuals.

The ethnographer can use a number of means to determine how the subjects behave and how they explain their behavior as well as other aspects of their environment. The ethnographer is able to observe students and to record their behavior in field notes and with standardized observation instruments. Interviews, both formal and informal, are utilized to ascertain the individuals' explanation of their actions and their environment. Another source of information available to the school ethnographer is school records of individual students. The case study approach permits the researcher to observe and interview students within the context of one grade and one school during the course of a school year.

The data gathered from this study were analyzed according to accepted ethnographic procedures. The emphasis in ethnographic methodology is to develop hypotheses, not test them. Generalizations and hypotheses have been developed both to organize and explain the data. Descriptive statistics and simple correlations were used where appropriate in the analysis, but the major portion of the data and its analysis is qualitative in nature.

Population

This study specifically examined the use and understanding of school time by 43 third-grade students in one of the four Wisconsin IGE elementary schools involved in the Resource Utilization Project. The research focused on the third graders both as individuals and as members of particular groups and classes.

The organization of this particular school was such that the lower ability third graders remained together in the primary unit, while the average and higher ability third graders were in the intermediate unit, which is located in a different wing of the building. There were eight girls and nine boys in the single primary third-grade class which also contained a small but varying number of second graders. The intermediate unit third grade contained nine girls and 17 boys who were taught together as a class for some subjects and mixed with fourth and fifth graders in two or more classes for other subjects.

These 43 students did not include any special education students because, although several students were mainstreamed into third-grade classes, their schedules were quite different from the other third graders, test scores were not available for them, and they tended to be in different grades depending on the subject area. Mainstreamed students will be included in the narrative when necessary to provide a more complete picture of students' use of school time but will not be profiled individually or included in any of the calculations relating to students' use of time.

Some analyses of the data will not include all of the 43 students classified as third graders. Because of the lack of parental consent for them to be included in the study, three students—one primary girl and an intermediate boy and girl--will not be profiled or mentioned as individuals. They will, however, be included in group data that could be gathered purely by observation and without having access to school records. Because another primary girl was absent during the school's administration of the Stanford Achievement Tests, there are only 39 students for whom the relationship of achievement scores and time use can be examined. A fifth student, an intermediate boy, moved out of the district in mid-March. Although observations and interview data were gathered about him, he could not be included in calculating correlations in which attendance for the year was used as one variable.

Instrumentation

Although the research relied heavily on ethnographic procedures of observation and interviewing, three instruments were employed to provide further data which might be relevant to understanding students' use and perception of school time.

1. Classroom Observation Form. This form was developed by the Resource Utilization Project to record individual student use of time in school. Observations of the behavior of five students were made at two-minute intervals during classes for an entire day. The observations were classified for each of the students individually according to one of eight categories: independent study, one-to-one instruction, small-group instruction, large-group instruction, studying with other students, process behavior, not-on-task behavior, or non-observable behavior. Other relevant data recorded on the form

included class size, group size, number of adults, date and exact time of observation. Each form contains data for only one subject of study. When the subject of study changed, a new form was required.

2. Stanford Achievement Tests. The locally normed percentile scores for spelling, social studies, science, total math, and total reading from these standardized achievement tests given by the school to third graders in September, 1979, were used. The specific version of the Stanford test used was Level Primary 2, Form A.
3. Otis-Lennon I.Q. Test. The scores from this test administered by the school to third graders in September, 1979, provided information about student mental ability.

Data Collection

The collection of data occurred during the 1979-80 school year, beginning in mid-October and concluding in mid-May. The collection procedures were ethnographic and included observations of the individual students' use of time, formal and informal interviews with students, and acquisition of copies of the school calendar and official schedules of third-grade students. Informal conversations with teachers, staff, and the principal; written responses from third graders to questions about their school day and friends; and perusal of student records for achievement test scores, IQ test scores, and attendance provided further useful information.

Individual students' use of time in all subjects was observed during the course of 51 observation days spent in the school. The researcher visited the school three days in October, two days in November, two days in December, five days in January, eleven days in February, eight days in March, thirteen days in April, and seven days in May. The dates of observation were planned to avoid days when the daily schedule was especially divergent from the official schedule, but at times it was not possible to know in advance what a particular day would be like schedulewise.

In order to deal with the different numbers of third graders in the primary and intermediate units, observation days had to be appropriately apportioned between them. Because two-thirds of the third graders were in the intermediate unit, 31 of the 51 days were spent observing there. The other one-third of the time, or 20 days, was spent with the primary unit. The visits were equally divided among the days of the week with an extra Tuesday included to observe the activities of an early dismissal day. The ten visits for each day of the week were further equally divided between the two units so that six of each day of the week were spent in the intermediate unit and four of each day in the primary unit.

Observation of student time use was recorded in two ways. The Resource Utilization Project's Classroom Observation Form was employed to record the activities of approximately five students on each day of observation. Each student was observed on five days over the seven-month data collection period. In order to obtain a more accurate and representative view of individual student time use as influenced by fluctuations in day-to-day schedules, each student was observed on each day of the week. The second means used for recording student time use was to keep field notes about events in the various classes. These notes augmented the information recorded on the observation forms and provided a way to keep track of the behavior of all students, even on days when they were not one of the five students specifically being followed.

In order to supplement the data from observations about student time use, all third-grade students were interviewed, and the interviews were taped and later transcribed. All 43 students were formally interviewed once, and the eight students--four from each unit--who had been interviewed first were interviewed a second time after the completion of the first round of interviews. These interviews ranged in length from a half hour to an hour depending on the informant's willingness and ability to express himself/herself verbally. The interviews were conducted at school during the noon recess. They involved primarily open-ended questioning. All the children were asked a basic set of questions to start them talking and, depending on their answers, additional appropriate questions and comments were used to find out more about what their school day was like to them. The researcher was not interested in eliciting and comparing responses to a particular set of questions, but in ascertaining how third graders understood the school day. It was this understanding that the questions were intended to evoke rather than a set of answers which could be quantified and tabulated. Throughout the days of observation, the researcher also chatted informally with students about events which had just taken place or were about to take place. Occasionally some students initiated comments to the researcher about their day and tried to explain something they thought the researcher might not understand.

The researcher also spoke with the teachers to fill in gaps in information about scheduled events or at times to find out more about previous unobserved events which had led up to an event the researcher had witnessed but could not adequately explain. Teachers sometimes also volunteered information on the background of the students and on particular problems in a student's life that might affect his/her school behavior. The researcher also spoke informally with the teacher aides and with the principal about events of the school day and year.

School archives yielded further useful information about student use of time. A copy of the school calendar provided data about the actual number of days in the 1979-80 school year, the number of early dismissal days, and the number of in-service and/or conference days. The daily and weekly schedules for third graders were used for comparison of administrative expectations about how much and in what way school time is spent by students with the actual use of school time by students.

On two occasions, the two third-grade social studies teachers asked their classes to write responses to questions the researcher wanted to ask all the children on the same day. On the days this occurred the researcher was not present so these activities did not affect the observation of student time use. The first time this procedure was used was at the end of February. At that time all the students were given a mimeographed sheet with five questions to answer: (1) Who decides what classes you have and at what times you have them? (2) How many months are in a year? (3) What does the principal do? (4) What is the longest class each day? (5) What is the shortest class each day? On the second occasion, at the end of April, students were asked to simply write the names of their three best friends in the third grade.

A final source of knowledge about students was school records on individual students. These contained scores from the Stanford Achievement Tests and Otis-Lennon I.Q. Tests administered to the third graders by the teachers in September, 1979, in accordance with the school's testing schedule. Student records provided information about student attendance in previous years. They also confirmed information gleaned from interviews about a student's age, experiences at other schools, and grades failed or completed.

Information from these records was transferred to a student record data form designed by the Resource Utilization Project.

Analysis of Data

Production of ethnography is a means for collecting data as well as for analyzing it. Glaser (in McCall & Simmons, 1969) described this methodology as the constant comparative method of qualitative analysis. The field observations and interviews were constantly being refined and focused during the period of research as patterns in responses, phenomena observed, and archival data began to emerge. Therefore, ethnographic analysis of data occurred in two stages. Reflective analysis of findings while still in the field was a persistent component of the researcher's data gathering and field experience and provided direction for the succeeding observations and interviews. The second and final stage of analysis came at the conclusion of the fieldwork. This stage was reached when the data being gathered ceased to provide new patterns or suggest new directions to pursue.

It was in the second and final stage of analysis that the researcher attempted to develop "grounded" formal theory from the generalizations and memos that emerged during the fieldwork (Glaser & Strauss, 1970). Because ethnography enables research on human subjects to combine quantitative and qualitative data, descriptive statistics and simple correlations relating to the use of school time and narrative accounts of student time use and perception serve both as products of this case study as well as bases for generating hypotheses which should be of value for establishing educational policy and for indicating future directions for research.

CHAPTER III

THE USE AND CONTROL OF STUDENT TIME

This chapter is based on data collected from observations at the school and from school records. It is divided into several sections. The first brief section provides background information about the school and scheduling constraints. The second section presents a description of the actual use and control of student time by the school's administration and faculty. The third section includes an examination of the actual use and control of student time by students. Student time that was jointly controlled by administration and teachers along with students is analyzed in the final section.

Background Data

It is necessary to establish the context in which the observations took place before the observation data related to the use and control of student time by administration, teachers, and students can be described. Two factors which are part of this background are the environment provided by the school and the official administrative and faculty constraints placed on the scheduling of student time at the school.

Description of the School

Kennedy School is the newest of the elementary schools in Jackson, a community of about 8,000. The town's economy is tied closely to the dairy industry and to the surrounding agricultural area. There is still a strong sense of central European heritage among the people. The number of nonwhite students in the school is miniscule, and this is also true of the community as a whole. Of the 512 students, only four were members of minority groups and two of them were in the third grade. The staff included no minority members.

The elementary school is the only open-plan IGE school in the local school system. Set on an 8.3 acre site, it was completed in 1978 at a cost of $1,810,000. The current principal and teachers had extensive involvement in determining the design and interior decoration of the 58,000 square foot school. The first floor contains rooms for art and music classes, special education, and kindergarten as well as a gymnasium and an all-purpose room/ lunchroom. The principal's office and the primary, intermediate, and upper unit areas are on the second floor. Each of the three units occupies a wing of the building, and the IMC serves as the central connecting area among the three units. The principal is able to observe the whole scene from his office which opens off the IMC. There are folding walls and numerous movable partitions that can be used to separate activity areas within each wing, but a child can never be out of view of an adult.

Although the school is theoretically nongraded, the primary unit includes grades 1 and 2 as well as one third-grade class; the intermediate unit has grades 3 and 4, along with one fifth-grade class; and the upper unit has grades 5 and 6. During the school day children move around--mostly within their own unit--to the appropriate level class for reading, mathematics, language arts, social studies and/or science. Most teachers teach all of these subjects, but the composition and size of their classes varies according to the subject being taught.

The students are ability grouped into reading and mathematics classes. There is further ability grouping within the reading classes, but not in the mathematics classes since the students can easily proceed to a higher level math class when the current math unit is completed. Third graders in the primary unit never mix with the intermediate third graders except for occasional joint classes in social studies and science during which they view a film or hear a visiting speaker.

In accordance with IGE guidelines, the teachers in each unit plan jointly for the students in their unit under the direction of the unit leader who also teaches in that unit. The primary unit has five teachers and the intermediate has six, while the upper unit has five. The number of teachers per unit and per grade can vary from year to year depending on the number of students assigned to each unit.

One principal is responsible for administration of the school. The faculty consists of 38 teachers. Of these, 29 are full time and nine are part time. In addition, there are 16 other staff members including ten teacher aides, a counselor, and IMC and clerical personnel. Student teachers are present intermittently throughout the year, as are volunteer mothers. These mothers run the primary unit's daily Superbooks program which gives each child a few minutes for reading to an adult once a week. Volunteer mothers help out in miscellaneous ways in each of the units.

Formal Administrative and Faculty Constraints on Scheduling of Student Time

A description of how third-grade students use their time must be prefaced by an explanation of administrative and faculty controls over this time. Allocation of student time operates within certain boundaries which, although arbitrary, can only be determined by administrative and/or faculty decisions. Decisions regarding time allocation are made at the district level, the school/unit level, and the classroom level.

District Level Decisions. The calendar for the school year is established by the central administration for all the schools in the Jackson school district. The 1979-80 school year began on Monday, August 27, for students and concluded on May 30 for a total of 179 days. Teachers were required to be present one day before the students arrived and one day after the students departed for the year. There were no "snow days" during the year so the calendar was followed as planned.

Of the 179 student days, 174 were full days and five were early dismissal days. Two of these early dismissal days, which ended at 2:00 p.m., fell on Tuesdays and three fell on Wednesdays. Therefore, during the year there were 35 full Mondays, 35 full Tuesdays, 35 full Wednesdays, 36 full Thursdays, and 33 full Fridays. The student days do not flow uninterrupted in blocks of complete weeks. There were 26 weeks of five full school days and 12 weeks which contained either an early dismissal day or one or more holidays for students.

The student weeks were divided into quarters for grading purposes. The first quarter conveniently ended the day before Thanksgiving and consisted of 42 student days. The second and third quarters each contained 49 days. The second quarter was interrupted by Christmas vacation and ended January 17. The third began January 18 and ran virtually uninterrupted to March 28, the beginning of spring vacation. The fourth quarter began after spring vacation and consisted of 39 days.

Over the course of the school year there were 18 vacation days shared by both students and teachers. These consisted of two days in October, two days at Thanksgiving, seven days at Christmas, and five days at Easter as well as Labor Day and Memorial Day. There were also six days which were holidays for students but which were convention, in-service, or conference days for teachers. These days were evenly distributed throughout the four quarters with one in the first quarter, two in each of the next two quarters, and one in the last quarter.

The district administration determined the length of the day for students. The primary unit grades had a shorter day than did the other elementary grades. Their day concluded earlier; they finished at 2:55 p.m. compared to 3:10 for the intermediate unit and 3:25 for the upper unit. This means that the primary day, which began at 8:20 a.m., ran for 6 hours 35 minutes. The intermediate unit theoretically had a school day of 6 hours 50 minutes and the upper unit 7 hours 5 minutes.

School Level Decisions. It was at the school level that subject time allocation and the schedule for the week and the day were determined for students. It was the school administrator's decision that the morning and afternoon 15-minute recesses must be staggered to avoid overcrowding on the playground and that lunch times must also be staggered to avoid overcrowding in the lunchroom. The administration and the faculty jointly made the decision to place the lower ability third-grade students in the primary unit which resulted in these students having the shortened day of the first and second graders.

The teachers within each unit had to decide how to divide the available time into subject blocks throughout the week. The unit teachers designed their unit schedule annually and submitted it to the principal for approval. The allocation of time per subject was relatively uniform for all students in a unit regardless of grade. Since students had to move about to be with the appropriate ability level reading and mathematics classes, it was important that all the teachers in one unit had a similar schedule for teaching these two subjects.

There were other parameters that the teachers had to keep in mind when planning activities for their individual classes each day and each week. The students in each unit were placed for organizational purposes in mixed grade homerooms and tended to remain in these homerooms with the same teacher for their entire stay in the unit. Time was allowed in the weekly schedule for homerooms to meet for activities. The unit teachers also had to coordinate their schedules with those of the music, art, and physical education teachers so that all children received approximately one hour of instruction in each of these special subjects each week. The librarian and counselor also had to be consulted to schedule their services for a half hour in reading classes on alternating weeks.

As seen in Figures 3.1 and 3.2, the schedule devised for each unit differed from that of the other units. A comparison of

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:20-8:30	- - - - - - - - -	- - - - - - -	Arrival - - - -	- - - - - - - -	- - - - - - -
8:30-9:45	8:30-8:50 Homeroom 8:50-9:20 Reading 9:20-9:45 Library/ Guidance 9:00-9:30 Title I Reading (2 students)	Reading	Reading 8:30-9:00 Title I Reading (4 students) 9:00-9:30 Title I Reading (2 students)	Reading	Reading 8:30-9:00 Title I Reading (4 students) 9:00-9:30 Title I Reading (2 students)
9:45-10:00	- - - - - - - - -	- - - - - - - -	Recess - - - - -	- - - - - - - -	- - - - - - - - -
10:00-10:15	Story and Milk 10:00-10:30 Title I Reading (4 students)	Story and Milk 10:00-10:30 Title I Mathematics (2 students)	10:00-10:40 Mathematics	Story and Milk 10:00-10:30 Title I Mathematics (3 students)	Story and Milk
10:15-11:05	Mathematics	Mathematics	10:40-11:05 Free Reading	Mathematics	Mathematics
11:05-11:10	- - - - - - - - -	- - - -	Prepare for Lunch - - - -	- - - - - - - -	- - - - - - -
11:15-12:15	- - - - - - - - -	- - - -	Lunch and Recess - - - -	- - - - - - - -	- - - - - - -
12:15-1:00	Attendance Spelling	12:15-12:30 Attendance 12:30-1:30 Art	12:15-12:30 Attendance 12:30-1:00 Gym	Attendance T.V. Wordshop and follow-up	Attendance T.V. Science and follow-up
1:00-1:30	Music		Spelling Title I Math. (1 student)	Music	Gym
1:30-1:45	Cursive Writing	Cursive Writing	Cursive Writing	Cursive Writing	Cursive Writing
1:45-2:00	- - - - - - - - -	- - - - - - -	Recess - - - -	- - - - - - - -	- - - - - - -
2:00-2:45	Social Studies or Science	Social Studies or Science	Social Studies or Science	Social Studies or Science (films)	Homeroom
2:45-2:55	- - - - - - - - -	- - - - - - -	Dismissal - - -	- - - - - - - -	- - - - - - -

Figure 3.1. Primary Unit Third-Grade Class Schedule.

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:20-8:30	- - - - - -	- - - - - - -	Arrival - -	- - - - - - - -	- - - - - -
8:30-9:30	8:30-9:00 Homeroom 9:00-9:30 Mathematics	Mathematics	Mathematics	Mathematics	Mathematics
9:30-10:00	Language (and Milk)	Language (and Milk)	Language (and Milk)	9:30-9:45 Language (and Milk) 9:45-10:00 T.V. Science	Language (and Milk)
10:00-10:15	- - - - - -	- - - - - - -	Recess - -	- - - - - - - -	- - - - - -
10:15-10:50	Spelling (Ms. X's Homeroom) Gym (Ms. Y's Homeroom)	Art (Mrs. X's Homeroom) Music (Ms. Y's Homeroom)	Music (Ms. X's Homeroom) Gym (Ms. Y's Homeroom)	Spelling (Ms. X's Homeroom) Music (Ms. Y's Homeroom)	Spelling (Ms. X's Homeroom) Art (Ms. Y's Homeroom)
10:55-11:25	Gym (Ms. X's Homeroom) Spelling (Ms. Y's Homeroom)	Spelling (Ms. Y's Homeroom)	Spelling	Gym (Ms. X's Homeroom) Spelling (Ms. Y's Homeroom)	Music (Ms. X's Homeroom)
11:25-12:30	- - - - - -	- - - - - -	Lunch and Recess -	- - - - - - - -	- - - - - -
12:30-2:00	Reading	12:30-1:00 Library/ Guidance 1:00-2:00 Reading (Ms. Y's class) Reading (Ms. X's class)	Reading	Reading (Ms. Y's class) 12:30-1:00 Library/ Guidance 1:00-2:00 Reading (Ms. X's class)	12:30-1:30 Reading 1:30-2:00 Homeroom
2:00-2:15	- - - - - -	- - - - - - -	Recess - -	- - - - - - - -	- - - - - -
2:15-3:00	Social Studies or Science	Social Studies or Science	Social Studies or Science	Social Studies or Science (films)	Language T.V. Wordshop
3:00-3:10	- - - - - -	- - - - - - -	Dismissal - -	- - - - - - - -	- - - - - -

Figure 3.2. Intermediate Unit Third-Grade Class Schedule.

the schedules for primary unit third graders and intermediate unit third graders reveals variations in subjects offered, in the daily order of occurrence of the subjects, and in the allocation of time to specific instructional areas and to noninstructional activities.

It is evident that the subjects offered in the two units were similar. However, students in the intermediate unit had language while those in the primary unit had cursive writing and storytime. The primary unit also had time set aside for free reading.

The order of subject occurrence varied more widely between the two units. While primary unit third graders had reading first in the morning, the intermediate unit did not have reading until right after lunch. The intermediate unit's day began with mathematics followed by language, with milk before the morning recess. The primary unit's day placed the storytime with milk and put mathematics after the morning recess, which occurred 15 minutes earlier than that of the intermediate unit.

Because of the intermediate unit's later lunch time, their special subjects (art, music, and physical education) were scheduled in the morning, while the primary unit did not have these subjects until after lunch. Spelling occurred in the morning in the intermediate unit; while in the primary unit, spelling was in the afternoon.

There was a similarity in the position of social studies/science in the schedules of the two units but because of different afternoon recess times, the intermediate unit social studies/science began later than that of the primary unit and lasted longer since the intermediate day was longer.

The primary unit was not scheduled as tightly as the intermediate unit. On Tuesday and Wednesday there was a noninstructional period of 15 minutes after lunch before students departed for physical education or art. The time was nominally slated for taking attendance, which on the other three days was completed in a minute or two before the start of afternoon classes.

Further differences appear in the schedules of the two units in terms of the time allocated for specific subjects. As shown in Table 3.1, most primary third graders whose schedules were unaffected by Title I remedial reading and/or mathematics had 330 minutes per week of scheduled reading class while third graders in the intermediate unit had 390 minutes. However, in the primary unit reading was offered in other forms throughout the week in addition to the ability-grouped class. Therefore, the primary third graders actually did have more reading time each week than did the intermediate third graders.

As for the other language arts related classes, the primary unit had less scheduled time in language/handwriting than did the intermediate unit. The primary unit also had less time allocated for spelling than did the intermediate unit.

TABLE 3.1

SUBJECT AREA TIME ALLOTMENTS IN MINUTES PER WEEK ACCORDING TO TYPE OF STUDENT SCHEDULE

		Reading									
Number of Students	Type of Student Schedule	Classroom Reading	Title I only	Total Reading, including classroom, Title I, story and pleasure	Language and Handwriting	Spelling	Math.	Title I Math.	Social Studies and/or Science	Art/ Music/ Gym.	Library or Guidance
	Primary Unit										
2	Title I low-ability reading only	270	90	430	120	75	225	--	225	180	25
2	Title I average-ability reading only	250	90	425	120	75	240	--	225	180	15
1	Title I math. only	330	--	385	120	75	210	60	225	180	25
1	Title I low-ability reading and morning math.	270	90	400	120	75	195	60	225	180	25
1	Title I low-ability reading and afternoon math.	270	90	415	120	45	210	60	225	180	25
10	Non-Title I	330	--	415	120	75	240	--	225	180	25
	Intermediate Unit										
12	Ms. X's Homeroom	390	--	390	180	125	270	--	195	210	30
14	Ms. Y's Homeroom	390	--	390	180	135	270	--	195	195	30

There were further differences between the two units in the time allocated for mathematics. While the intermediate unit was scheduled to receive 270 minutes per week, the primary unit received only 240. However, some of the primary third graders were exposed to either more or less than this amount depending on whether or not they were in Title I remedial reading and/or mathematics classes.

Other differences in the schedules of the two units are observable in the amounts of time allocated each week for social studies/science, the special subjects, and library/guidance. The primary schedule included more time than did the intermediate schedule for social studies/science but less time for the special subjects including library/guidance.

Table 3.2 provides a comparison of the amounts of instructional and noninstructional time scheduled for each unit. Not only were students in the primary unit in school for less time each week, but the proportion of that time devoted to instructional activity was actually slightly less than that of the intermediate unit. For the primary unit, 31.89 percent of the school week was spent in noninstructional activities. For the intermediate unit, 29.12 percent of the time of students in one homeroom and 29.36 percent of the time of students in the other homeroom was allocated to noninstructional activity.

TABLE 3.2

GENERAL TIME ALLOTMENTS IN MINUTES PER WEEK ACCORDING TO TYPE OF OFFICIAL STUDENT SCHEDULE

Number of Students	Type of Student Schedule	Instructional			Noninstructional					Total Instruction and Homeroom	Total Non-Instructional	Total School Time
		Academic	Specials	Library or Guidance	Homeroom Activities	Morning and Afternoon Recesses	Lunch and Noon Recess	Transition time	Before- and after-class in-school time			
	Primary Unit											
2	Title I low-ability reading only	1075	180	25	65	150	300	80	100	1345	630	1975
2	Title I average-ability reading only	1085	180	15	65	150	300	80	100	1345	630	1975
1	Title I math. only	1075	180	25	65	150	300	80	100	1345	630	1975
1	Title I low-ability reading and Title I morning math.	1075	180	25	65	150	300	80	100	1345	630	1975
1	Title I low-ability reading and Title I afternoon math.	1075	180	25	65	150	300	80	100	1345	630	1975
10	Non-Title I	1075	180	25	65	150	300	80	100	1345	630	1975
	Intermediate Unit											
12	Ms. X's Homeroom	1160	210	30	60	150	325	25	100	1460	600	2060
14	Ms. Y's Homeroom	1170	195	30	60	150	325	25	100	1455	605	2060

Classroom Level Decisions. How the actual class instruction in a particular subject and for any day was organized was up to the individual teacher in each unit. Among the constraints were those imposed by the open-plan building and the availability of audio-visual equipment. All three third-grade teachers were affected by having to structure their activities in reading classes around the individual schedules of the students who had special instruction several days each week in Title I remedial reading. The primary third-grade teacher also had to plan mathematics and spelling classes around the Title I reading and/or mathematics students' schedules which overlapped with the regular third-grade mathematics and spelling classes. She also had to take into consideration the primary unit's Superbooks program which required individual students to be out of reading classes for unpredictable five- or ten-minute periods each week.

The Actual Use and Control of Student Time by Administration and Faculty

Numerous factors affected how the administration and faculty used student time. In this section these factors are grouped according to deviations in the daily schedule caused by administration and faculty and according to the teachers' use of student time within subjects. The final portion of this section describes how teachers indicated their control over student time.

Daily Deviations from the Official Schedule

Although there was an official printed weekly and daily schedule designed by each unit's teachers, that schedule was regarded more as a set of guidelines than as a rigid dictator of teacher and student behavior. Both planned and unplanned situations resulted in deviations from the variations in the official schedule. Simply because a certain amount of time was scheduled for a subject did not mean that amount of time would be provided every time the subject was scheduled. Although the order of the subjects was fairly rigid, both the order and the amount of time per subject could be changed.

It is necessary to examine both the scheduled and the actual times for the 51 days observed and the percentages of actual to scheduled time in each subject area based on a compilation of the five days of observation per student to demonstrate the flexibility of the daily and weekly schedule. Both administration and teachers were able to affect the schedule. Teachers especially had a certain amount of latitude in when they started and ended classes and in whether they actually taught the subject slated for a particular block of time. These decisions affected how much time students were actually exposed to subjects in contrast to what the official schedule indicated.

Tables 3.3 through 3.7 reveal the actual amount of time students were exposed to particular subjects on the day that

TABLE 3.3

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

PRIMARY UNIT THIRD GRADE--MONDAYS

	Observation Dates				Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Subject	2/11	2/18	4/7	4/21				
Reading	32	28	34	32	126	120	31.5	30
Library or Guidance	18	24	22	22	86	100	21.5	25
Storytime	16		12	14	42	60	10.5	15
Mathematics	46	36	48	44	174	200	43.5	50
Spelling	22	44	34	38	138	180	34.5	45
Music	26	26	30	30	112	120	28	30
Handwriting	12	14	12		38	60	9.5	15
Science)	40		40	8	88)		22)	
or)					)172	180	)43	45
Social Studies)		44		40	84)		21)	
Daily Total	212	216	232	228	888	1020	222	255
Homeroom	20	27	20	20				

TABLE 3.4

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

PRIMARY UNIT THIRD GRADE—TUESDAYS

	Observation Dates							
Subject	2/5*	2/26	3/11	4/29	Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Reading	74	76	78	76	304	300	76	75
Storytime	16	14	16	20	66	60	16.5	15
Mathematics	26	52	36	46	160	200	40	50
(TV/dental hygiene)	(14)				(14)		(3.5)	
Art	58	58	60	58	234	240	58.5	60
Handwriting	8	14	14	14	50	60	12.5	15
Social Studies	___	42	38	38	118	180	39.3	45
Daily Total	196	256	242	252	946	1040	236.5	260

*Early dismissal.

( ) Indicates an unscheduled subject.

TABLE 3.5

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

PRIMARY UNIT THIRD GRADE--WEDNESDAYS

	Observation Dates				Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Subject	12/12	2/20	3/26	4/9				
Reading	72	76	72	78	298	300	74.5	75
Storytime	8				8))102	60	(2)	15
Free Reading	22	20	26	26	94)		23.5	
Mathematics	28	36	30	34	128	200	32	50
(Afternoon reading)	(8)				(8)		(2)	
Physical Education	30	30	30	32	122	120	30.5	30
Spelling	24	26	30	26	106	120	26.5	30
Handwriting	14	14	14	18	60	60	15	15
Science			40	42	82))158	180	20.5))39.5	45
Social Studies	38	38			76)		19)	
Daily Total	244	240	242	256	982	1040	245.5	260

( ) Indicates an unscheduled subject.

TABLE 3.6

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

PRIMARY UNIT THIRD GRADE--THURSDAYS

Subject	Observation Dates				Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
	10/18	11/1	2/7	3/27				
Reading	72	76	76	74	298	300	74.5	75
Storytime	12	16	10	18	56	60	14	15
Mathematics	46	44	46	24	160	200	40	50
(TV--Easter special)				(12)	(12)		(3)	
TV Language	40	38	36	28	142	180	35.5	45
Language film			24	20	44		11	
Music	30	28	28	28	114	120	28.5	30
Handwriting	10	14	28		52	60	13	15
Science or Social Studies	24	40		12	76	180	19	45
Daily Total	234	256	248	216	954	1100	238.5	275
Other Activities:								
D. Duck movie	14							

( ) Indicates an unscheduled subject.

TABLE 3.7

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

PRIMARY UNIT THIRD GRADE--FRIDAYS

Subject	Observation Dates 10/19	3/7	3/14	5/2	Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Reading	70	76	76	76	298	300	74.5	75
Storytime	18	12	22	14	66	60	16.5	15
Mathematics	42	44	36	42	164	200	41	50
Science	40	18		18	76	180	19	45
Spelling			34		34		8.5	
Physical Education	30	28	32	28	118	120	29.5	30
Handwriting	20	28	12		60	60	15	15
Daily Total	220	206	212	178	816	920	204	230
Other Activities:								
Homeroom	45	45	45	45				

activities in the primary unit third grade were observed. Tables 3.8 through 3.12 provide the same information for the intermediate third graders in Mrs. Y's homeroom as do Tables 3.13 through 3.17 for those in Mrs. X's homeroom. Six of each day of the week were spent in the intermediate unit and these were evenly divided into three days for each of the two homeroom groups with their slightly varying schedules.

The data in these tables indicate that actual schedules did not adhere strictly to the official schedule for each day. The variations in time actually given a subject each day became less extreme when averaged, however, so that over time students did tend to receive closer to the total amount of time scheduled for a subject than might be assumed if one observed only a single day. This means, though, that there was no "typical day" at this school, for not only did the days within a week vary, they also varied from week to week.

A disruption in one part of the day's schedule might have an effect on other portions. If part of the time allocated for a subject was preempted, the remaining time for that subject might be too brief to use for that subject and so the subject would be eliminated that day. When this happened, the teacher might devise a totally unrelated activity for the remaining time or rearrange the week's schedule by taking another day's subject and placing it in the time slot that needed filling.

TABLE 3.8

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

INTERMEDIATE UNIT THIRD GRADE--MONDAYS*

Subject	Observation Dates 3/10	4/28	5/12	Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Mathematics	22	28	28	78	90	26	30
(Catch-up in Science or Mathematics)			(10)	(10)		(3.3)	
Language	24	30		54	90	27.3	30
Spelling	30	30	30	90	120	30	40
Physical Education	30	28	30	88	90	29.3	30
Reading	84	84	86	254	270	84.6	90
(TV Science)			(18)	(18)		(6)	
Science or Social Studies	46		42	88	135	29.3	45
Daily Total	236	200	244	680	795	226.6	265
Other Activities:							
Homeroom/ Guidance	20	22	30				
Musicale		60					

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*Ms. Y's homeroom students only.

( ) Indicates an unscheduled subject.

TABLE 3.9

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

INTERMEDIATE UNIT THIRD GRADE--TUESDAYS*

	Observation Dates			Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Subject	1/29	4/15	5/13				
Mathematics	66	54	46	166	180	55.3	60
(Science)			(4)	(4)		(1.3)	
Language	38	32	32	102	90	34	30
Art	64	62	60	186	210	62	70
Guidance/ Library	X 44	X 24	X 50	X 118	90	39.3	30
Reading	X Y 42/86	X Y 60/84	X Y 40/90	X Y 142/260	X Y 180/270	X Y 47.3/86.6	X Y 60/90
Social Studies	30	42	46	118	135	39.3	45
Daily Total	284	274	278	836	885	278.6	295

*Ms. Y's homeroom students only.

( ) Indicates an unscheduled subject.

X = Ms. X's students only.
Y = Ms. Y's students only.

TABLE 3.10

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

INTERMEDIATE UNIT THIRD GRADE--WEDNESDAYS*

Subject	Observation Dates				Total actual minutes	Total without 2/27	Total scheduled minutes	Total without 2/27	Average actual minutes per day	Average without 2/27	Scheduled minutes per day
	1/30	2/27**	3/5	4/30							
Mathematics	60	58	54	58	230	172	240	180	57.5	57.3	60
Language	30	26	38	32	126	100	120	90	31.5	33.3	30
Music	26	28	32	28	114	86	160	120	28.5	28.6	40
Spelling	24	24	24	28	100	76	120	90	25	25.3	30
Reading	84		90	84	258	258	360	270	64.5	86.0	90
(Creative writing)		(34)			(34)				(8.5)		
Social Studies)	46										
or)					140	140	180	135	35	46.6	45
Science)			46	48							
Daily Total	270	170	284	278	1002	832	1180	885	250.5	277.3	295
Other Activities:											
Disney movie		120									

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*Ms. Y's homeroom students only.

**Early dismissal.

( ) Indicates an unscheduled subject.

TABLE 3.11

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

INTERMEDIATE UNIT THIRD GRADE—THURSDAYS[*]

Subject	Observation Dates 12/13	 4/10	 5/1	Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Mathematics	58	F X 56/58	52	F X 166/168	180	F X 55.3/56	60
Language		14		14	45	4.6	15
TV-Science	16	16	16	48	45	16	15
Spelling	30	34	30	94	120	31.3	40
Physical Education	30	32	30	92	90	30.6	30
Guidance) or) Library)		Y 22	Y 36	Y 58	90	Y 19.3	Y 30
Reading	22	X Y 82/60	X Y 84/88	X Y 188/130	X Y 270/180	X Y 62.6/43.3	X Y 90/60
Social Studies) or) Science)		16 4 14	44	78	135	26	45
Daily Total	156	F X 268/270	256	F(Y) X 680/682	885	F(Y) X 226.6/227.3	295

Other Activities:

Christmas decorations and skit	120 min. including recess

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[*] Ms. Y's homeroom students only.

F = Ms. F's students only.
X = Ms. X's students only.
Y = Ms. Y's students only.

TABLE 3.12

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

INTERMEDIATE UNIT THIRD GRADE--FRIDAYS*

Subject	Observation Dates 2/1	2/15	2/29	Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Mathematics	54	62	60	176	180	58.6	60
Language	36	34	22	92	90	30.6	30
(Catch-up in Science and Language)			(10)	(10)		(3.3)	
Spelling	30	30	42	102	120	34	40
Music	32	32	24	88	90	29.3	30
Spelling Test) and) Reading/Current) Events)	16 58	14 46	20 42	50))196 146)	180	16.6))65.2 48.6)	60
TV Language	38	22	44	104	120	34.6	40
(Social Studies)	(14)	(22)	___	(36)	___	(12)	___
Daily Total	278	262	264	804	780	268	260
Other Activities:							
Homeroom	0	30	28				

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*Ms. Y's homeroom students only.

( ) Indicates an unscheduled subject.

TABLE 3.13

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

INTERMEDIATE UNIT THIRD GRADE--MONDAYS*

Subject	Observation Dates 1/28	4/14	5/5	Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Mathematics	32	X F 26/28	20	X F 78/80	90	X F 26/26.6	30
Language	26	30	26	82	90	27.3	30
Spelling	26	28	28	82	90	27.3	30
Physical Education	30	30	30	90	90	30	40
Reading	90	90	86	266	270	88.6	90
Social Studies	48	44	50	142	35	47.3	45
Daily Total	252	X F 248/250	240	X F 740/742	795	X F 264.6/247.3	265
Other Activities:							
Homeroom/ Guidance/TV	20	22	26	68	(45)		

*Ms. X's homeroom students only.

( ) Indicates an unscheduled subject.

F = Ms. F's students only.
X = Ms. X's students only.

TABLE 3.14

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

INTERMEDIATE UNIT THIRD GRADE--TUESDAYS*

	Observation Dates						
Subject	2/19	4/8	4/22	Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Mathematics	56	X F 60/62	28	X F 144/146	180	X F 48/46.6	60
Language	26	28	26	80	90	26.6	30
Music	28	30	26	84	90	28	40
Spelling	20	24	36	80	90	26.6	30
(Making hearts)	(6)			(6)		(2)	
Library) or) Guidance)	X 28	X 32	X 24	X 84	X 90	X 28	X 30
Reading	X Y 54/82	X Y 58/92	X Y 58/82	X Y 170/256	X Y 180/270	X Y 56.6/85.3	X Y 60/90
Social Studies) or) Science)	46	44	46	136	135	45.3	45
Daily Total	264	All 278	244	X(X) F(X) 784/786 X(Y) F(Y) 786 788	885	261.3 → 262.6	295
Other Activities:							
Unit meeting			30				

*Ms. X's homeroom students only.

( ) Indicates an unscheduled subject.

F = Ms. F's students only.
X = Ms. X's students only.
Y = Ms. Y's students only.

TABLE 3.15

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

INTERMEDIATE UNIT THIRD GRADE--WEDNESDAYS*

Subject	Observation Dates			Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
	10/17	3/12	4/23				
Mathematics	54	50	50	154	180	51.3	60
Language	30	30	32	92	90	30.6	30
Physical Education	26	26	26	78	90	26.0	40
(TV--bike safety)			(26)	(26)		(8.6)	
Spelling	28	30	6	64	90	21.3	30
Reading	86	84	84	254	270	84.6	90
Science	50	38	46	134	135	44.6	45
Daily Total	274	258	270	802	885	267.0	295

*Ms. X's homeroom students only.

( ) Indicates an unscheduled subject.

TABLE 3.16

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

INTERMEDIATE UNIT THIRD GRADE--THURSDAYS*

Subject	Observation Dates			Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
	1/21	4/24	5/8				
Mathematics	56	52	56	164	180	54.6	60
Language/) Handwriting) film)	20)) 14)		14	48	45	16	15
TV Science	16		18	34	45	11.3	15
Music	28	28	32	88	90	29.3	40
Spelling	26	26	24	76	90	25.3	30
Library or Guidance	X 46	X 24	X & Y 24	X Y 24/94	90	X Y 8/31.3	30
Reading	X Y 70/24	X Y 86/62	X Y 58/60	X Y 214/146	X Y 270/180	X Y 71.3/48.6	X Y 90/60
Story and Popcorn	(10)			(10)		(3.3)	
Social Studies	24	62	80	134	135	45	45
Daily Total	264	254	X Y 306/308	X Y 792/794	885	X Y 264.1/264.7	295

*Ms. X's homeroom students only.

( ) Indicates an unscheduled subject.

X = Ms. X's students only.
Y = Ms. Y's students only.

TABLE 3.17

ACTUAL AMOUNTS OF TIME ALLOTTED DAILY BY SUBJECT AREA

INTERMEDIATE UNIT THIRD GRADE--FRIDAYS*

Subject	Observation Dates 11/2	2/8	4/18	Total actual minutes	Total scheduled minutes	Average actual minutes per day	Scheduled minutes per day
Mathematics	58	40	56	154	180	51.3	68
Language	28	22	30	80	90	26.6	30
Art	68	62	54	184	210	61.3	70
Spelling test) and)	12	18	14	44)) 128		14.6	
Reading-Current) Events)	44		40	8[illegible])	180	28.0	60
TV Language		16		16	120	5.3	40
Science) or) Stocial Studies)	44	46	40)	130	0	43.3	0
Daily Total	254	204	234	692	780	230.6	260
Other Activities:							
Homeroom	30		30				
Sledding party		60					

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*Ms. X's homeroom students only.

There were also events not obvious from these tables which further explain why there was no typical school day which flowed as smoothly as the schedule might suggest. These events never appear on any schedule. Each seemed momentary and of little consequence when it occurred, but over the course of a year they tended to constitute a substantial amount of time lost from actual instructional activities.

Teachers contributed to these unpredictable occurrences which rearranged the schedule. Sending a student on an errand during class sometimes meant that not only the student, but the entire class could not proceed until he or she returned. Teachers' talking with other teachers, aides, or parents could either delay the start of class or interrupt it. Brief birthday celebrations permitted in the classroom also delayed class. The absence of a teacher through illness or the need to attend to personal business further affected the smooth flow of the daily and weekly schedule. Teachers decided which students must stay in during recess to continue working in a particular subject, thus allocating more time for one subject to that child. They could, on occasion, replace attendance at a special subject class with catch-up work in reading or mathematics. Teachers also arranged special events, e.g., sledding parties, which displaced regularly scheduled subjects. Extra activities which were included around holidays sometimes displaced regular activities, too. Teachers could work together to exchange lunch times between units and so effectively either lengthened or shortened the class preceding lunch. The malfunctioning of a piece of audiovisual equipment could sabotage the schedule as well.

The administration also made decisions that explain why every class was not automatically the length prescribed by the master schedule. Aside from the occasional interruptions of intercom announcements, there were tornado and fire drills, popcorn sales to raise money, eye and ear tests, and height and weight measurement days. The principal decided whether there would be outside recess on days of inclement weather. This decision, in turn, affected the starting and ending times of classes on either side of the inside recess for that day. There were special events such as Fifties' Day, Grandparents' Day, and Florida Dress-Up Days which led to scheduling changes. Holiday festivities arranged for the whole school could also affect the schedule.

A comparison of actual to scheduled time can be presented in another way, as seen in Table 3.18. This table was compiled from the observation records on the 43 individual third graders rather than from descriptions of the specific 51 days on which students were observed. This table goes beyond the previous series of tables (3.3 through 3.17), for it shows the implications of this variety in the 51 days for the students concerned.

TABLE 3.18

PERCENTAGES OF ACTUAL TO SCHEDULED TIME IN SUBJECT AREAS
(EXCLUDING INDIVIDUAL RECESS TIME SPENT WORKING)

Number of Students	Type of Student Schedule	Reading: Classroom	Reading: Title I only	Reading: Total Reading, including classroom, Title I, and pleasure reading	Language and Handwriting	Spelling	Math.	Title I Math.	Social Studies/ Science	Art/ Music/ P.E.	Library/ Guidance
	Primary Unit										
	I. Differentiated										
2	1) Title I low-ability Reading only	100.74	94.44	99.99			87.99				96.00
2	2) Title I average-ability Reading only	109.20	112.21	106.58			88.33				36.00
1	3) Title I Mathematics only	101.81		103.37			80.95	93.33			72.00
1	4) Title I low-ability Reading and Title I morning Mathematics	100.74	97.77	102.50			94.35	93.33			96.00
1	5) Title I low-ability Reading and Title I afternoon Mathematics	100.74	97.77	102.65		138.66	85.71	90.00			96.00
10	6) Non-Title I	114.23		104.14			81.74				83.20
or 17 (16)	II. Total Class				100.69	(92.66)			64.04	95.02	
	Intermediate Unit										
	I. Differentiated										
12	1) Ms. X's Homeroom					96.80				84.20	
14	2) Ms. Y's Homeroom					99.88				93.25	
or 26	II. Total Class	84.30		85.28	83.28		89.96		108.51		108.41

When the percentage of actual to scheduled time for subject areas is computed, most students received at least 80 percent of the scheduled instructional time. Primary unit social studies and/or science was a notable exception. The fact that the primary unit had to wait for the arrival of the intermediate unit students on days when the primary and intermediate unit third graders had a joint class was largely responsible for this anomaly. Since the intermediate unit's recess was not over until 2:15 p.m., while the primary unit's was over at 2:00 p.m. and their social studies/ science was scheduled to begin at that time, the primary students lost out timewise on joint unit days.

An interesting point evident from the data in Table 3.18 is that primary students generally received all or more than their scheduled reading time, but they received much less mathematics time unless they also had Title I math. This was largely explained by the fact that the primary teacher could, on any day, extend storytime into math time. This was especially likely to happen if it was necessary for the late arriving Title I mathematics students to return before instructions could be given for that day's math lesson.

The percentages for the intermediate unit also are easily explained. Since reading came immediately after lunch, it often started later and ended a couple of minutes early before recess. Also guidance/library, which occurred during reading, might simply run over into the reading time. Language was sometimes displaced by announcements from the teacher since that was the first class during the day when all of the intermediate third graders were together. Language could also be displaced by catch-up work in another subject if students finished the daily language assignment before the end of the class period. The provision of less than the scheduled amount of time for mathematics was mostly a result of starting class a few minutes late because it was the first subject of the day. Social studies/science tended to receive more than their allocated time because they came at the end of the day and could run over into the time set aside for preparing to go home.

It must be remembered that the actual amounts of time allocated for subjects differed between the two units so that although the percentages suggest students in the two units were receiving either varying or similar amounts of time in similar subjects, the actual number of minutes may turn out to be the same or quite different.

Teachers' Use of Student Time Within Subjects

Not only did teachers affect the allocation of time per subject, but they determined to a large extent how students would use their time during the course of a class period. Based on the Resource Utilization Project's descriptions, both instructional and noninstructional behavior occurred in classes. The instructional behavior included working independently, one-to-one instruction, small-group instruction, large-group instruction, and students working together. Noninstructional behavior included process behavior, resulting from teacher imposed controls on student time, and off-task behavior. The latter behavior was largely under the control of the individual student, however, and will be dealt with in more detail in a later section. Comparison of the behavioral categories by their occurrence among subjects will be followed by a description of how those behaviors manifest themselves within each subject.

Comparison of the Behavioral Categories by Occurrence Among Subjects

Table 3.19 provides a comparison of the percentage of time all third graders spent in each instructional and noninstructional behavior category for each subject. The largest percentage of time, 31.60, was spent working independently, while the second largest percentage of time, 30.19, was spent in large-group instruction. The third most frequent category was noninstructional behavior which accounted for 24.96 percent of student classroom time. Of this percentage, 20.31 percent resulted from process behavior. The other behavioral categories occurred minimally in comparison with these major uses of student time.

The use of time in each subject did not necessarily follow the percentages compiled for all subjects. Some subjects were more heavily involved in one type of instructional behavior than another.

TABLE 3.19

PERCENTAGE COMPARISON OF HOW THIRD GRADERS' TIME IS SPENT IN EACH SUBJECT AREA

Subject Area	Behavioral Categories								
	Instructional					Total Instructional	Non-instructional		Total Non-instructional
	1	2	3	4	5		6	7 and 8	
I. Academic Subjects									
Reading (including Title I)	41.01	2.62	22.15	11.70	.61	78.11	16.64	5.19	21.83
Language Arts	33.92	.62	3.63	27.92	5.41	71.50	22.05	6.36	28.41
Mathematics (including Title I)	35.96	1.66	1.88	22.78	8.44	70.73	24.51	4.70	29.22
Social Studies and/or Science	20.67	.26		57.30	1.52	79.75	16.95	3.24	20.19
II. Special Subjects									
Music				79.61		79.61	18.42	1.94	20.37
Physical Education	4.27			46.03	27.73	78.03	21.54	.39	21.93
Art	52.25	.68	.23	12.07	1.36	66.59	28.28	5.08	33.36
Library or Guidance	6.20	.11		77.86		84.17	13.29	2.52	15.81
Academic Subjects	34.23	1.48	8.74	26.66	3.81	74.92	19.99	5.06	25.05
Special Subjects	18.06	.23	.07	48.46	8.67	75.49	21.95	2.53	24.48
All Subjects	31.60	1.27	7.33	30.19	4.60	74.99	20.31	4.65	24.96

The academic subjects showed the greatest variety in categories of behavior. For instance, reading instruction included independent work almost four times as often as it did large-group instruction. Small-group instruction occurred in reading for a larger percentage of time than it did in any other subject. The second highest percentage of independent work time in class occurred in mathematics. For language arts, the percentages for independent work and large-group instruction were much more similar than they were for reading. For social studies/science the percentages were in favor of large-group instruction which was used almost three times as heavily as independent work.

The less frequently occurring behaviors of one-to-one instruction, small-group instruction, and students working together varied in their percentages according to the subject in which they occurred. Although small-group instruction, for instance, was used over 22 percent of the time in reading, it was rarely used in mathematics and language arts and never used in social studies/science. Students working together was more likely to occur than was one-to-one instruction. Most of the one-to-one instruction indicated in mathematics and reading belonged strictly to the recipients of Title I remedial mathematics and reading. Mathematics and language arts provided most of the opportunities for students to work with each other.

Interestingly, reading, with the largest percentage of its time spent in independent work, and social studies/science, with the largest percentage of its time spent in large-group instruction, had the lowest amounts of time in process behavior. Despite the fact that over one-third of mathematics time was spent in independent work and this proportion was only slightly less than that for independent work in reading, the largest percentage of process behavior occurred in mathematics. It seems, therefore, that large-group instruction was more likely to be related to a reduction in process behavior in academic subjects than was independent work.

Among academic subjects, off-task behavior occurred least frequently in social studies/science, the subjects with the largest amount of large-group instruction. This suggests that large-group behavior not only was related to a reduction in process behavior but also in off-task behavior.

As for special subjects, independent work dominated only in art, while large-group instruction took up the majority of class time in music and library/guidance and received a plurality of the time in physical education. Students working together did not account for a significant percentage in any special subject except physical education. There was approximately the same amount of process behavior in special subjects taken as a whole as in academic subjects taken as a whole. The most process behavior occurred in art and the least in library/guidance and music. The other instructional behaviors were rarely observed in special subjects.

Of further interest in Table 3.19 are the percentages of total instructional and total noninstructional time for various subjects. The table reveals that both academic subjects and special subjects had approximately the same proportions of instructional time and noninstructional time. The individual subject areas themselves deviated only slightly from the general tendency for three-fourths of the class time to have been devoted to instructional activities and one-fourth to have gone to noninstructional activities.

For a comparison of how primary third graders and intermediate third graders spent their time by subject area, it is necessary to look at Tables 3.20 and 3.21. The primary third graders spent 77.08 percent of their class time in instructional behavior while the intermediate third graders spent slightly less, 73.79 percent, in that category. Although the total instructional behavior category percentages are similar for the two units, there is a difference in the amounts of large-group instruction and independent work in which the two groups participated. The primary spent 35.14 percent of their time in large-group instruction while the intermediate spent 27.27 percent. The larger percentage in large-group instruction for primary third graders occurred in both academic subjects and special subjects. The situation was reversed with regard to independent work, for it was the intermediate unit with 33.17 percent which had more of this type of instruction. In contrast, in the primary unit, 28.96 percent of the time was spent

TABLE 3.20

PERCENTAGE COMPARISON OF HOW PRIMARY THIRD GRADERS' TIME IS SPENT IN EACH SUBJECT AREA (EXCLUDING RECESS)

	Behavioral Categories								
	Instructional					Total Instructional	Non-instructional		Total Non-instructional
Subject Area	1	2	3	4	5		6	7 and 8	
I. Academic Subjects									
Reading (including Title I)	36.86	5.11	16.49	17.75	.96	77.17	19.58	3.19	22.77
Language Arts	27.92	1.13	.05	40.59	8.25	77.94	17.49	4.51	22.00
Mathematics (including Title I)	30.86	2.69	2.04	25.00	9.18	69.77	27.15	3.03	30.18
Social Studies and/or Science	22.62	.31		57.73	.18	80.84	14.99	4.11	19.10
II. Special Subjects									
Music				84.78		84.78	12.88	2.31	15.19
Physical Education	6.99			50.66	21.33	78.98	20.78	.20	20.98
Art	58.91	.21	.62	12.69	.43	72.86	23.23	3.87	27.10
Library or Guidance				89.33		89.33	9.03	1.63	10.66
Academic Subjects	30.90	2.88	6.68	31.33	4.61	76.40	19.88	3.69	23.57
Special Subjects	19.21	.06	.18	54.24	6.77	80.46	17.54	1.97	19.51
All Subjects	28.96	2.41	5.60	35.14	4.97	77.08	19.50	3.39	22.89

TABLE 3.21

PERCENTAGE COMPARISON OF HOW INTERMEDIATE THIRD GRADERS' TIME IS SPENT IN EACH SUBJECT AREA (EXCLUDING RECESS)

Subject Area	Behavioral Categories: Instructional 1	2	3	4	5	Total Instructional	Non-instructional 6	7 and 8	Total Non-instructional
I. Academic Subjects									
Reading (including Title I)	43.72	1.00	25.86	7.75	.37	78.70	14.71	6.50	21.21
Language Arts	37.85	.29	5.97	19.63	3.56	67.30	25.03	7.57	32.60
Mathematics (including Title I)	39.30	1.00	1.78	21.33	7.95	71.36	22.78	5.80	28.58
Social Studies and/or Science	19.40	.23		57.02	2.39	79.04	18.22	2.68	20.90
II. Special Subjects									
Music				76.23		76.23	22.05	1.70	23.75
Physical Education	2.50			43.00	31.41	77.41	22.04	.52	22.56
Art	48.15	.97		11.69	1.94	62.75	31.39	5.82	37.21
Library or Guidance	11.74	.21		67.59		79.54	17.10	3.32	20.42
Academic Subjects	36.18	.65	9.95	23.91	3.35	74.04	20.05	5.87	25.92
Special Subjects	17.36	.34		44.91	9.83	72.44	24.66	2.87	27.53
All Subjects	33.17	.60	8.36	27.27	4.39	73.79	20.79	5.39	26.18

working independently. Another point of comparison is in the amount of small-group instruction for the two units. Although both units spent relatively small amounts of time in this instructional behavior, the intermediate unit did spend slightly more time in small groups than did the primary unit.

There was enough variation between units in the instructional mode percentages in just the academic subjects to merit comment. Independent work was used more heavily in the intermediate unit for every academic subject area except social studies/science. About 10 percent more independent work time occurred in intermediate language arts and mathematics than in those subjects in the primary unit. The differences in amount of time spent in one-to-one instruction were uniformly low in all academic subjects for both units. The largest percentage occurred in primary unit reading, however, because of the Title I reading activities provided for some students.

The other instructional modes in the academic subjects also deserve comment. Comparison of the use of small-group instruction shows that more of this mode of instruction occurred in the intermediate unit. The percentage differences between the two groups were most pronounced in reading. Large-group instruction was more dominant for primary third graders than for intermediate third graders in every academic subject, especially language arts and reading. Both groups received about the same percentage of large-group instruction in social studies/science. The percentage of time for students working together was not particularly noteworthy for either unit in any subject although primary third graders tended to have somewhat more opportunity for this type of instruction. Process behavior occurred most frequently in language arts for the intermediate unit and in mathematics for the primary unit. This behavior occurred least often in reading in the intermediate unit and in social studies/science in the primary unit.

Comparison of the modes of instruction in special subjects shows that their distribution is relatively similar for the two units, but the percentages of each of these instructional modes differ. Working independently occurred mostly in art for both units. There was virtually no one-to-one instruction or small-group instruction for either unit. Large-group instruction predominated in music for both units, but a higher percentage was found in the primary unit. This was also true for library/guidance. More large-group instruction was observed in primary physical education than in intermediate physical education, and the reverse was true for students working together. An interesting fact evident from these tables is that process behavior occurred slightly less often for primary third graders in special subjects than for intermediate third graders possibly because the primary third graders attended these subjects in smaller classes.

Description by Subject Area of the Teacher-Determined Behavioral Categories

Reading. The typical reading class must be described separately for each unit. The primary third-grade reading class contained 17 third graders and two second graders. The class tended to start the 75-minute period each day with large-group instruction related to a worksheet. This was followed by either independent work or small-group instruction in one of three reading ability groups. The schedules of the six third graders and one second-grade student who participated in Title I reading during the regular reading class had to be taken into account by the teacher when she or the aide worked with ability groups. The groups met either sequentially or simultaneously if an aide was available to work with one of them. Furthermore, they were used for instruction only four days of the week because the Weekly Reader was used as the basis for large-group reading instruction on Monday.

Ability-grouping within a class occurred only in reading at this school. In the primary unit there were four third-grade students and one second grader in the lowest reading group. All the students in this group also received Title I remedial reading. The middle-ability group consisted of nine third graders, two of whom received Title I reading. The highest ability group contained four students--three third graders and one second grader. The group that the teacher was working with always sat on the floor at the back of the room. If two groups were underway simultaneously, one group was usually taken to a vacant partitioned area next to the classroom, while the other group worked on the floor in the usual place. When the teacher finished group work for that class period, she sat in the back of the room and students brought their workbooks to her to be checked. Generally, three or four students were in line at any one time.

During the 16 observation days occurring Tuesday through Friday, which were days for ability-grouped reading, the middle reading group (which was the largest) met the most frequently and received the largest number of minutes with the teacher or aide. It met 11 times: nine times for instruction (including once with an aide) and twice for tests administered by the teacher. The group met for 153 minutes during the nine instructional days, or approximately 17 minutes per meeting.

During the same time period, the lowest ability group received the next highest amount of small-group instruction, but it must be remembered that all these children also received additional small-group or one-to-one instruction in Title I reading. This group met nine times: seven times for instruction (including once with an aide) and twice for tests administered by the teacher. For the seven instructional meetings, the group met a total of 150 minutes, or 21.42 minutes per meeting.

The highest ability group received the least amount of small-group instruction. Students in this group only met six times, one of which was for a teacher-administered test. Of the five meetings for instruction, four were conducted by an aide. This ability group received a total of 135 minutes of small-group instruction, or approximately 27 minutes per meeting. Although the highest ability group tended to meet less often than the two lower ability groups, the meeting tended to last longer when this group did meet. On four of its five nontest meetings, it met simultaneously with the middle-ability group because an aide was available to work with the group.

Several factors affected the teacher's scheduling of small-group instruction for the ability groups. One factor that the teacher had to consider in her planning was the Superbooks program. Volunteer mothers worked with each child five to ten minutes apiece on one day each week. There was no established schedule specifying which students would be called away, at what time, or on which day. The teacher generally tried to send students who were not members of the ability group with which she was working. Another factor that affected the use of small-group instruction in reading was the provision of 25 minutes of guidance/library which always fell during the reading class on Mondays. These two activities occurred on alternate Mondays and were planned and taught by either the counselor or the librarian. They had to conclude at 9:45 a.m. when the buzzer for recess sounded.

The Title I reading program also limited the primary third-grade teacher in her decision with regard to when and for how long the groups might meet. All of the lowest ability-group students had Title I reading from 10:00 to 10:30 a.m. on Monday and from 8:30 to 9:00 a.m. on Wednesday and Friday. Two of the middle-ability-group students had Title I reading from 9:00 to 9:30 a.m. on Monday, Wednesday, and Friday. Only on Tuesday and Thursday could the teacher work with the groups in any order that she chose.

Title I reading was held in a small enclosed room near the school office. The reading specialist had two teacher aides who assisted her. The lowest reading ability group consisting of four third graders and one second grader were often divided into pairs to work with the aides with the remaining student working with the teacher. Sometimes all the students might work independently on an assignment. The two middle ability-group third graders received more one-to-one instruction from the teacher and aide, but they also worked in small groups with one adult or independently.

In the intermediate unit, third graders were divided (along with some fourth and fifth graders) between two reading classes by ability and further divided into ability groups within those classes. The lower ability reading class consisted of 25 students, and the higher ability class contained 24 students.

Within the lower ability class, the high ability reading group consisted of nine third graders and one fourth grader. The lower ability group had six third graders and nine fourth graders. Of the 25 students in this class, only five were girls, of which four were third graders. All but one of them were in the higher ability group in the class.

Within the high-ability reading class, the high-ability group consisted of eight third graders, two fifth graders, and two fourth graders. The low-ability reading group in this class was also composed of 12 students, two of whom were third graders and 10 of whom were fourth graders.

The structure of activities in these two reading classes seldom varied during the 90-minute reading period Monday through Thursday. The teacher worked first with a group seated together in rows on one side of the room while the other group worked independently on the other side of the room. This pattern only changed during a few weeks in spring when a student teacher was available to work simultaneously with one of the groups, usually the low-ability group in the low-ability class. When this occurred, the teacher usually took her group to another part of the unit to work so that the activities in one group would not distract the other. On days of small-group instruction, group work was followed by the teacher's grading of individual student workbooks. This process often involved a long wait in line by the students for the first check and then a return to the line to await checking of corrections. There could be from two to as many as ten students in line at one time, but the teachers tried to limit the line to five or six students. This limitation simply meant that some students waited at their desks rather than stood in line.

On Fridays all the third graders were together with the teacher who usually had the lower ability reading class. Instead of using their reading textbooks, they read and discussed their Weekly Readers after first taking and grading a spelling test.

Of the 25 days, excluding Fridays, spent observing students in the low-ability class, 23 days were used for small-group instruction. Of these, both ability groups received instruction on 20 days. On the other three days, only the lower group received small-group instruction. On two of those three, the high-ability group had tests rather than instruction. Reading was cancelled on two of the 25 days for a movie and for making Christmas decorations.

For the 20 days when both groups were taught, the high-ability group received an average of 27.9 minutes of small-group instruction per reading class, and the low-ability reading group received 29.65 minutes per reading class. If the additional day of small-group instruction is included in the mean for the low-ability group, then the figure is virtually the same at 29.66 minutes.

These figures do not reveal, however, an interesting variation in the amount of small-group instruction each group received when a student teacher was present. Of the 20 days when both groups received instruction, 15 days were with the one regular teacher alone. On those days the mean small-group instruction time for the high-ability group was 24 minutes per reading class. However, for the five days when a student teacher was available to help in the class, these figures are reversed. The high-ability group received 39.6 minutes of small-group instruction per class and the low-ability group received 24.8 minutes per class.

On the 15 days when no student teacher was present, the lower ability group met first 11 times, and the higher ability group met first four times. When the student teacher was present, the groups were instructed simultaneously.

In the other intermediate unit reading class in which there were third graders, small-group instruction was observed on 18 days including 17 days of small-group instruction for both groups. On the other day, only the higher ability group received instruction. Of the remaining seven days, students worked independently with their regular textbooks on two days and independently on S.R.A. activities on two days. On one day reading was cancelled for a movie and on another day, for making Christmas decorations. As for the remaining one day, the high-ability reading class could not be observed because the teacher took her class to another part of the unit. On most days, however, the two intermediate classes with third graders were in adjoining areas and could easily be observed simultaneously.

On the 17 days when both groups in the high-ability class met, the higher ability group received an average of 22.17 minutes of small-group instruction, while the low-ability group averaged 17.88 minutes of small-group instruction. The mean number of minutes of small-group instruction for the high-ability group for 18 days was 21.83 minutes per reading class. Of the 17 days, the high-ability group met first only twice while the low-ability group received small-group instruction first 15 times.

The two intermediate teachers had some of the same factors to consider as did the primary third-grade teacher in planning the use of student time in reading class. Title I reading pulled students out of the lower ability groups in both classes but, with one exception, none of these students were third graders. Only one third-grade girl in the low-ability group of the high-ability class received Title I aid and that was for two half-hour periods a week from November 5 to January 30.

The other factor that the two teachers had to plan around was the half-hour each week that alternated between guidance and library. This occurred at the beginning of reading class on Tuesday for the high-ability class, and on Thursday for the low-ability class. Unlike the primary third-grade reading class, where guidance/library was ended by the buzzer and recess, there was no rigid curtailment of the guidance time which tended to last longer than the half hour allotted. On alternate weeks when the students went to the library for a planned program of instruction by the librarian, the half-hour time allocation was always followed. Although the two reading classes were scheduled to have separate guidance and library classes, on at least one occasion they had a joint class during the low-ability class's usual time because the high-ability class had missed its regular time that week due to testing.

Tables 3.22 through 3.24 provide comparisons of the amount of time allocated to independent work, small-group instruction, and process behavior in reading for all third graders. Table 3.22 reveals correlations between the number of minutes actually spent in reading and the number of those minutes spent working independently in reading. Only for primary third graders does it appear that increased instruction time resulted in increased independent work time. The increase is most significant for the primary boys and that increase was largely a function of the additional time some boys had in the Title I reading program.

Table 3.23 presents correlation between the number of minutes actually spent in reading and the number of those minutes spent in small-group instruction. Primary third-grade girls tended to get more small-group instruction as the number of minutes in reading increased because of the additional minutes some of them received in Title I reading. The correlation coefficient of .578 for the intermediate boys reflects the fact that boys in the low-ability

TABLE 3.22

CORRELATION BETWEEN TOTAL NUMBER OF MINUTES SPENT IN READING (INCLUDING TITLE I) AND NUMBER OF MINUTES WORKING INDEPENDENTLY IN READING

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	.559*
9	Boys	.646*
8	Girls	.453
26	Intermediate third graders	.166
17	Boys	.033
9	Girls	.456
26	Total Boys	.067
17	Total Girls	.191
43	Total third graders	.112

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.23

CORRELATION BETWEEN TOTAL NUMBER OF MINUTES SPENT IN READING (INCLUDING TITLE I) AND NUMBER OF MINUTES IN SMALL-GROUP INSTRUCTION IN READING

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	.423
9	Boys	.291
8	Girls	.879*
26	Intermediate third graders	.388
17	Boys	.578*
9	Girls	.088
26	Total Boys	.211
17	Total Girls	.050
43	Total third graders	.149

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.24

CORRELATION BETWEEN TOTAL NUMBER OF MINUTES SPENT IN READING (INCLUDING TITLE I) AND NUMBER OF MINUTES OF PROCESS BEHAVIOR IN READING

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	-.261
9	Boys	-.064
8	Girls	.770*
26	Intermediate third graders	.441
17	Boys	.413
9	Girls	.455
26	Total Boys	.391
17	Total Girls	.261
43	Total third graders	.334

*Denotes correlations assumed to be significant by the researcher.

group of the low reading class and boys in the high group of the high-ability reading class in the intermediate unit tended to be part of the groups which received the most small-group instruction in each of their classes.

Table 3.24 provides information about time use which students were in part responsible for determining. Process behavior in reading could involve pencil sharpening, getting dictionaries, choosing S.R.A. activity cards, and most importantly, standing in line to have workbooks checked by the teacher. The correlation coefficient .770 for primary third-grade girls reflects the fact that the girls tended to be standing in line longer and were in line more often to talk to the teacher and have her check their workbooks.

The primary unit third graders also received reading instruction in two additional reading-related subjects which students in the intermediate unit did not have. Daily, except Wednesdays, the primary third graders' teacher read them a chapter or two from a library book. They also drank their milk during that time. On Wednesdays they did not have this storytime because mathematics class began immediately after recess and free reading time followed mathematics. During free reading, students could sit anywhere in the room and independently read library books they had checked out earlier that day or on a previous day.

Mathematics. Mathematics class was structured much the same for classes in both units. There was no ability grouping within classes, but the classes themselves followed a hierarchical ranking according to ability. The pattern of instruction varied little between classes. There was large-group instruction at the beginning of a new unit and after that for perhaps a few minutes daily when necessary. Students worked independently at their own pace on completing sets of packets. Occasional variations took the form of mathematics games for the entire class or timed tests on basic skills which were given to the entire class. Also, when students finished their work in the intermediate class, they could find a partner and practice together on flashcards.

Since students had to stand in line frequently in mathematics class while they waited for help or to have packets checked, the relation between the number of minutes spent in mathematics and the number of minutes spent in process behavior is of interest. Table 3.25 reveals that there was a rather high correlation for intermediate third graders. They had more minutes in mathematics daily than did primary third graders and there was an accompanying increase in their process behavior. This increase was especially noticeable among intermediate girls who tended to seek help from the teacher more often and therefore stood in line more often while awaiting help.

TABLE 3.25

CORRELATION BETWEEN TOTAL NUMBER OF MINUTES SPENT IN MATHEMATICS (INCLUDING TITLE I) AND NUMBER OF MINUTES OF PROCESS BEHAVIOR IN MATHEMATICS

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	-.049
9	Boys	.249
8	Girls	-.190
26	Intermediate third graders	.599*
17	Boys	.507*
9	Girls	.825*
26	Total Boys	.246
17	Total Girls	.441
43	Total third graders	.321

*Denotes correlations assumed to be significant by the researcher.

The negative correlation coefficient for primary third-grade girls reflects the fact that three girls received additional minutes in Title I mathematics. Because neither the Title I math teacher nor her aide worked with more than two students during that math class, there was very little opportunity or reason for process behavior to occur.

Social Studies/Science. The mode of instruction in these subjects was dominated by large-group instruction in the form of teacher-led discussion, students' reading aloud, or films. There was some opportunity for working independently on projects which all students in a class did simultaneously. Packets were used for some units, but often these had to be completed at home or were done as a class. The primary third-grade teacher and the intermediate third-grade social studies/science teacher alternated teaching each others' classes in two-week blocks so that they did not both need to prepare the same unit. Occasionally, local residents who had visited a country being studied might speak to the two classes together or they might have a joint tasting party related to a culture being studied. Every Thursday the two classes of third graders were together in the primary unit to watch films.

There was also a 14-minute T.V. science program each week. The program was not related to the current science unit, and the two classes of third graders watched the program in their separate units and at different times during the week. The two classes did not watch the same programs each week either.

Language Arts. This term encompasses several subjects: language, handwriting, spelling, T.V. Wordshop, language-related films, and creative writing. The type of instructional behavior varied according to the particular subject and the unit in which it occurred.

Language was taught specifically as a subject only to the intermediate third graders. All of them were together for this subject. It generally involved a preliminary explanation by the teacher of the worksheet to be completed independently by students that day. (Quite often the explanation took longer than the time needed to actually do the worksheet.) Language might also include handwriting instruction which often involved a demonstration by the teacher using an overhead projector. Students drank their milk during this morning class. Throughout the year one student, and near the end of the year a second student, missed language one day a week to take part in a special guidance session with the counselor. They were still expected to complete their language work for that day, however. Language was at times shortened or cancelled entirely if the teacher had announcements to make to all third graders or if the group needed to plan for an upcoming event or if a birthday celebration was in order for that day.

In the primary unit, handwriting was scheduled as a separate subject. It usually involved a blackboard demonstration by the teacher before the students finished the day's worksheet on their own. Students occasionally had an opportunity to use special erasable cards to practice their handwriting skills if they were up to date on their handwriting assignments.

Spelling occurred in both units but was treated differently in each of them. The primary unit students worked through sequenced sets of words each week. Spelling instruction for them was organized according to ability level but there was no overt grouping. Students could practice their words independently or could play various word games with a partner in order to learn particular words. Students did not have to be working on the same set of words to work together. The choice of working with a partner or independently was left to the individual student. Students tested each other on the words when they were ready, and the papers were then given to the teacher.

Spelling instruction was provided in a much different manner in the intermediate unit. There third-grade students, along with fourth-grade students, were placed in one of two spelling classes according to which homeroom they were in. The manner of instruction was similar in both classes. All the third-grade students completed the same unit in the same third-grade workbook each week, and the fourth-grade students did the same in the fourth-grade workbook. Students generally did one page each day and checked the previous day's page as well. Following these activities, students could practice their words with a partner. On Fridays, all the third-grade students were tested by one teacher at the beginning of reading class, and all the fourth graders were tested by the other teacher at the same time.

T.V. Wordshop was the only other regularly scheduled language arts subject. It occurred once a week in each unit, but the two units did not necessarily see the same programs. It was followed by a class discussion and occasionally by an assignment related to the program topic.

The other language arts subjects occurred only occasionally. Language-related films were usually joint unit activities and were shown on Thursday afternoons occasionally along with or in place of social studies/science films. Creative writing occurred several times on Friday afternoons in the intermediate unit, but its appearance as a subject was brief. Students in the primary unit were assigned creative writing too, but it was mostly for homework or free time and was not a regular subject for which school time was allocated. Students in the primary third grade were encouraged to have adults at home help them with the writing assignments.

Music, Art, and Physical Education. Instruction in these subjects was similar in both units. Students in the intermediate unit attended these subjects with their homeroom class which also contained fourth graders. Mainstreamed students were present in both classes for primary third graders and those for intermediate third graders.

In music, students received large-group instruction through films and teacher explanations and sang or played instruments while the teacher directed them. Although there was some large-group instruction in art, mostly in the form of explanation of the current project, much of the time was spent working individually on an assignment. Students were free to talk to their neighbors while they worked. The process behavior in this subject resulted from the need to locate and obtain materials and to clean up at the end of the class. Their teacher provided occasional help to individuals when necessary.

Physical education was a mixture of large-group games, independent skills development, and team games with other students. Much of the large-group instruction in this class was in the form of demonstration by the teacher or his watching and guiding the class in the game being played.

In all three special subjects, process behavior included more disciplinary action or speech from the teachers than tended to occur in the academic subjects. In the academic subjects, students were engaged in finishing independent work within certain time limits, which served to restrain their behavior, or were involved in teacher-led activities which only allowed one individual to speak at a time. As these two restraints did not exist in the special subjects, students had to be reprimanded more often as part of class proceedings there.

How Teachers Indicated Their Control of Student Time

Teachers were observed to exhibit their control over student time in a number of ways. Especially in the primary third grade, students were rarely told how much time they had to complete a task. In the intermediate unit they were informed more frequently but usually only during the last few minutes allotted for an activity rather than at the beginning.

When teachers did tell students how much time remained to complete one activity before the class went on to another or the period was over, they were often unreliable. Teachers generally did not indicate how much time was left by stating the time at which the next activity would begin. Instead, they indicated the amount of time left in terms of minutes, and they seldom adhered to their own statements. Sometimes they actually gave less time than indicated and at other times they gave more. Generally, though, they tended to give two or three more minutes than they actually said were left to finish. This behavior tended to occur most frequently when the teacher herself was busy at a task such as grading papers.

When students inquired about time limits, the usual reply was that they would have enough time to do the assignment. The assumed ability of the teacher always to allot the right amount of time necessary for an activity was summed up by the primary third-grade girl who said, "If you get done before you're supposed to, then you haven't done it right."

Teachers indicated their control of time by rearranging the daily schedules. Students were generally informed a week in advance of a field trip or a party. On the occasions when students might need special materials or need to wear special clothes, they were also told about activities ahead of time. Sometimes students did not know of an alteration in the schedule. For example, when the intermediate and upper units exchanged lunch times for a week the students were not informed in advance, but they were then told how long the change would last.

Teachers could dole out or take away minutes either as a reward or a punishment. The few minutes before morning and afternoon recesses were especially valuable. Students could be given those minutes either individually or as a group to go to recess early. In other words, they were given additional time of their own which they could use as they wished rather than as the teacher wished. Speed was often rewarded in this way, but only if it was accompanied by accuracy.

Teachers could also take away part or all of recess for individuals who were deemed to need extra time to complete assignments. On rare occasions teachers did not permit a child to go to a special class if the child had too many missing reading or mathematics lessons to finish them during recesses.

The threat of taking away some or all of a student's recess time was used frequently by teachers to express displeasure with students' conduct or with their slowness in completing assignments or for disruptive behavior.

In the instances when a child did complete the assignment faster than the time allocated, the teacher still retained nominal control of the remaining time because the teacher's permission had to be obtained to engage in other activities. This was less true in the primary third grade where there were always a number of permitted options known to the children. Quite frequently in the intermediate unit students were told not to start another activity because there were only two or three minutes left in the class period.

Another way in which teachers displayed control of time was on those occasions when the buzzer sounded to end the class while the teacher was still talking. If students were uncertain as to whether the teacher or the buzzer had more control over their actions, the teacher soon cleared that up! Nevertheless, there were always a few students who continued to regard the buzzer as a higher authority and constantly had to be reminded that this was not the case. Often the message was reenforced by their delayed departure for recess.

The scheduling of daily activities within any subject area was generally known only to the teacher who might or might not list the scheduled order of events on the blackboard. The longer the period of time that the class lasted, the more likely this action was to occur. Listing the schedule of activities tended to happen only in reading and mathematics, since students in these classes would be working at a different pace from each other. In this instance not only would one oral set of directions not suffice for all students, but more than one set of oral directions for different students or groups of students would be confusing unless written on the board.

Because of the flexibility in the scheduling of activities on Friday afternoons, the teachers often wrote the entire afternoon agenda on the board while students were at lunch. They could then see the plan when they returned on their way to outside recess after lunch.

Even when students knew the agenda for the class, they still did not know how much time they would actually have available to work on each activity. When worksheets were used, the directions invariably lasted longer than the amount of time needed to complete them. In general, directions tended to last longer in the primary third grade than in the intermediate third grade. Although the students had the assignment before them, they were not permitted to begin work until the teacher had finished speaking. One intermediate boy was repeatedly reprimanded for not waiting until the teacher had finished giving directions.

Teachers also attempted to control students' use of non-school time through homework assignments. Periodically, long-range assignments such as book reports or short stories were given. Most homework assignments were less specific in nature and limited to a few students who could not complete a particular day's assignment in school. This could be in mathematics, reading, or social studies/science. Most children had this type of assignment about once a week.

The Actual Use and Control of Student Time by Students

There were only two ways in which a third grader could control the allotted time during a school day. The student demonstrated these moments of control by either off-task behavior or by simply being absent.

Off-Task Time

The one behavioral category over which the student exercised control was off-task behavior. This noninstructional behavior occurred in every subject area and in conjunction with all of the other six teacher-controlled student behaviors. Off-task behavior took many forms. If a student was gazing about at other children or talking to them without permission, then the student was engaging in off-task behavior. Most off-task behavior was of this variety especially since the open-plan school allowed activities in adjoining classroom areas to be observed by students. When a child left the room to get a drink or to go to the restroom, those activities were also considered off-task behavior. Some students engaged in more off-task behavior than others, and that characteristic may be related to the length of the subject being taught, the student's ability level as measured by achievement test and IQ test scores, chronological age, and absence rate from school. High correlations between off-task time and any of these factors qualify them to be considered as predictors of off-task time.

Table 3.26 presents the individual variations in percentages of total school time (including recess work time) spent off-task. These percentages are grouped according to unit and sex. The range ran from 11.02 percent of time spent off-task down to 1.28 percent. Intermediate girls with 5.71 percent tended to be off-task twice as much as their counterparts in the primary third grade who with 2.32 percent had the least amount of off-task behavior of all third graders. On the other hand, primary boys with 5.05 percent and intermediate boys with 5.21 percent had very similar percentages of off-task time. The mean for all third graders was 4.69 percent.

Table 3.27 indicates the percentage of off-task time of third graders in each subject area. The highest percentage occurred in language arts, but the percentages in reading and art were close to those in language arts. The lowest percentage occurred in physical education. A higher percentage of off-task time occurred in the academic subjects than in the special subjects.

TABLE 3.26

RANKING OF PERCENTAGES OF TOTAL SCHOOL TIME (INCLUDING RECESS WORK TIME) SPENT OFF-TASK ACCORDING TO UNIT AND SEX

	Primary Boys	Primary Girls	Primary Unit	Intermediate Boys	Intermediate Girls	Intermediate Unit	Total Third Graders
Individual Students	11.02	3.17		8.50	9.17		
	5.63	2.93		8.25	7.43		
	5.32	2.77		7.80	7.03		
	5.14	2.40		7.78	5.94		
	4.95	2.31		7.74	5.90		
	4.94	1.99		6.99	5.77		
	3.97	1.55		5.89	4.59		
	2.61	1.44		5.71	4.29		
	1.89			4.93	1.28		
				4.77			
				4.66			
				3.81			
				3.61			
				2.42			
				2.26			
				1.77			
				1.45			
Mean	5.05	2.32	3.64	5.21	5.71	5.37	4.69
Median	4.95	2.35	2.93	4.93	5.90	5.74	4.77
Range	9.13	1.73	9.58	6.55	7.89	7.89	9.74

TABLE 3.27

COMPARISON OF PERCENTAGES OF OFF-TASK BEHAVIOR AMONG CATEGORIES OF THIRD GRADERS AND ACCORDING TO SUBJECT AREA (EXCLUDING RECESS TIME)

	Category of Third Graders								
	Primary Unit			Intermediate Unit			All	All	All Third
Subject Area	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Graders
I. Academic Subjects									
Reading (including Title I)	4.58	1.62	3.19	5.89	7.64	6.50	5.44	4.81	5.19
Language Arts	5.35	3.56	4.51	7.65	7.43	7.57	6.85	5.61	6.36
Mathematics (including Title I)	4.24	1.66	3.03	5.45	6.46	5.80	5.03	4.20	4.70
Social Studies and/or Science	4.88	3.25	4.11	2.58	2.85	2.68	3.38	3.04	3.24
II. Special Subjects									
Music	3.99	.43	2.31	1.58	1.91	1.70	2.42	1.21	1.94
Physical Education	.38		.20	.39	.76	.52	.38	.40	.39
Art	5.17	2.58	3.87	6.45	4.64	5.82	6.04	3.67	5.08
Library or Guidance	3.08		1.63	4.90	.62	3.32	4.12	.25	2.52
Academic Subjects	4.81	2.43	3.69	5.61	6.37	5.87	5.35	4.62	5.06
Special Subjects	2.94	.90	1.97	3.19	2.28	2.87	3.11	1.65	2.53
All Subjects	4.48	2.18	3.39	5.22	5.72	5.39	4.98	4.13	4.65

Table 3.27 also provides for a comparison of the primary and intermediate unit third graders in the percentage of their off-task time (excluding recess work time) in each subject area. The intermediate unit had a mean of 5.39 percent off-task time for all subjects, while the primary unit had a slightly lower percentage, 3.39 percent. Much of this difference occurred in the academic subjects, for the intermediate unit experienced a mean 5.87 percent off-task time for these subjects in contrast to the lower mean of 3.69 percent in the primary unit. The actual percentage of off-task time was greater for the intermediate unit in each of the academic subject areas except social studies/science. In reading, the percentage for the intermediate unit was more than twice that of the primary unit. Intermediate unit language arts classes had the highest percentage of off-task behavior of all subjects for either unit.

The mean percentage of off-task time in the special subjects was about half that of the academic subjects for each unit. As for the academic subjects, the intermediate unit had a slightly higher mean percentage of off-task behavior in the special subjects. The percentages of off-task time were distributed somewhat differently among the special subjects in the two units. Both units exhibited the greatest amount of off-task behavior in art and the least in physical education. The intermediate unit experienced more off-task behavior in library/guidance than in music, while the reverse was true for primary third graders.

It is also possible, using the data in Table 3.27, to compare the percentage of off-task behavior between and among girls and boys. When mean percentages of off-task time are compared for all boys and all girls, it appears that boys generally were off-task somewhat more than girls for both academic and special subjects. The higher percentage of off-task time for girls in physical education is too small to reverse this overall trend. The difference between boys and girls is, except for library/guidance, only about a percentage point. However, these differences according to sex are not maintained when the sexes are compared within each unit.

In the primary unit boys engaged in a higher percentage of off-task behavior in all subjects than did girls. In the academic subjects, boys had over 2.5 times more off-task behavior in reading and mathematics than did girls. The differences are less extreme in language arts and social studies/science. In the special subjects, the primary girls actually exhibited no off-task behavior in physical education or library/guidance. In art, boys had twice as much off-task behavior as girls, and they had nine times as much in music.

In the intermediate unit, it was the girls rather than the boys who displayed the greatest amount of off-task behavior in academic subjects. However, the boys outdid the girls in such behavior in the special subjects. When the academic subjects are examined individually, there was one, language arts, in which the boys did slightly exceed the girls' off-task time. More off-task behavior occurred in language arts than in any other subject area in either the intermediate unit or the primary unit. The actual differences in the percentages of off-task time for intermediate unit boys and girls in academic subjects were not as pronounced as those between the primary unit boys and girls. The ratio of off-task time in the academic subjects to that in special subjects was greater for intermediate girls than boys. Girls were marginally more off-task than boys in music and physical education, but the boys were considerably more off-task than the girls in art and library/guidance.

These evident differences among sexes and units in percentages of off-task behavior might be explained by several factors. One possible predictor of off-task behavior is the length of the class. Table 3.28 provides correlations between the amount of time in academic subjects and the amount of off-task time in those subjects. Tables 3.29 and 3.30 provide correlations between off-task time and the number of minutes in the two subjects--reading and mathematics--which both units had separately every day. Since both reading and mathematics classes lasted longer in the intermediate unit than in the primary unit, the correlations for the length of these subjects and off-task time are especially relevant to the

Table 3.28

CORRELATION BETWEEN TOTAL NUMBER OF MINUTES SPENT IN ACADEMIC SUBJECTS AND NUMBER OF MINUTES OFF-TASK IN ACADEMIC SUBJECTS

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	-.262
9	Boys	-.530*
8	Girls	.730*
26	Intermediate third graders	.133
17	Boys	.251
9	Girls	-.088
26	Total Boys	.243
17	Total Girls	.667*
43	Total third graders	.427

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.29

CORRELATION BETWEEN TOTAL NUMBER OF MINUTES SPENT IN READING (INCLUDING TITLE I) AND NUMBER OF MINUTES OF TIME OFF-TASK IN READING

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	-.141
9	Boys	-.205
8	Girls	-.624*
26	Intermediate third graders	.184
17	Boys	.400
9	Girls	-.000
26	Total Boys	.108
17	Total Girls	-.285
43	Total third graders	-.056

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.30

CORRELATION BETWEEN TOTAL NUMBER OF MINUTES SPENT IN MATHEMATICS (INCLUDING TITLE I) AND NUMBER OF MINUTES OF TIME OFF-TASK IN MATHEMATICS

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	-.208
9	Boys	-.041
8	Girls	.396
26	Intermediate third graders	-.042
17	Boys	.030
9	Girls	-.116
26	Total Boys	.257
17	Total Girls	.321
43	Total third graders	.276

*Denotes correlations assumed to be significant by the researcher.

discussion of the occurrence of off-task time. The tables provide correlation coefficients for comparisons of units and sexes.

Table 3.28 reveals low correlations between the amount of time spent in academic subjects and the number of minutes of off-task behavior in those subjects for boys and a significant positive correlation for girls. The correlations for the primary unit boys and girls deserve separate examination. The primary girls exhibited a significant positive correlation between amount of time in academic subjects and amount of off-task behavior, whereas the primary boys displayed a significant negative correlation. Thus, more time in academic subjects was related to more off-task behavior for the primary girls but less off-task behavior for the boys.

Table 3.29 reveals that the correlation between the length of reading class and amount of off-task time was not significant. However, correlations by unit and sex reveal a more varied picture for third graders. The correlation between the length of reading class and the amount of off-task behavior was positive, while for the primary unit the correlation was negative. For the girls in the primary unit, the length of reading class was more inversely related to the amount of off-task time than for the boys. Intermediate boys had a positive correlation, but intermediate girls had none at all.

The correlations between total number of minutes in mathematics class and the amount of time off-task are shown in Table 3.30.

The correlations were too low in all categories to suggest that the length of the mathematics class was related to the amount of off-task behavior of students.

A second factor which could be related to the occurrence of off-task behavior is the ability level of students. This possibility will be discussed first in terms of achievement test scores (as shown in Tables 3.31 through 3.38) and then in terms of IQ scores (as shown in Tables 3.41 and 3.42). Both of the tests were administered at the beginning of the 1979-80 school year.

Table 3.31 provides data on the total achievement scores for all third graders by unit and sex. A comparison of mean achievement scores for the primary and intermediate units revealed significant differences between the students in these two units. The mean achievement score of the intermediate unit was twice that of the primary unit. This difference existed between primary boys and intermediate boys and between primary girls and intermediate girls. Within the primary unit, the mean scores for boys and for girls were almost the same, but the difference between girls and boys in the intermediate unit was pronounced. The boys had a significantly higher mean score and a much smaller range of scores despite the fact that there were twice as many boys as girls in the unit. The data shown in this table also suggest that factors other than achievement scores affected how students were ability-grouped in this school.

TABLE 3.31

RANKING OF TOTAL ACHIEVEMENT TEST SCORES ACCORDING TO UNIT AND SEX

	Primary Boys	Primary Girls	Primary Unit	Intermediate Boys	Intermediate Girls	Intermediate Unit	Total Third Graders
Individual Students	64.6	64.6		99.9	96.9		
	50.5	36.4		93.8	85.7		
	36.4	31.4		92.8	78.7		
	31.4	31.4		89.8	73.6		
	31.4	15.3		83.7	57.5		
	26.4	8.2		78.7	41.5		
	18.3			73.6	36.4		
	18.3			69.6	15.3		
	12.3			69.6			
				69.6			
				64.6			
				63.0			
				57.5			
				57.5			
				50.5			
				50.5			
Mean Score	32.17	31.21	31.79	72.79	60.70	68.76	54.54
Median Score	31.40	31.40	31.40	69.60	65.55	69.60	57.50
Range	52.30	56.40	56.40	49.40	81.60	84.60	91.70

Total achievement test scores are correlated with off-task time for all subjects in Table 3.32. The overall correlation was not significant. Only for primary girls was there any indication that ability level measured by achievement test scores might be related to the amount of off-task time. When off-task time in only academic subjects was correlated with the achievement test scores, as in Table 3.33, a similar picture emerged. Once again there was little correlation except for primary girls, and correlation was low.

Tables 3.34 through 3.38 provide correlations for off-task time in specific subject areas and the relevant achievement test scores. Table 3.34 reveals that for all third graders the achievement test scores in reading exhibited low correlations with off-task time in reading. However, for primary boys there was a correlation of .731. As their achievement scores increased so did the occurrence of off-task behavior. It must be remembered, however, that in terms of reading classes, these boys were in the lowest ability-level reading class. Although their level of ability was still generally below that of the intermediate reading classes, there was some overlap between specific scores in the two groups, but those that may be regarded as high in the low ability class would be merely average or even low in the higher ability classes. Another point of interest is the direction of the relationship in the two units. Although the correlation coefficients were both

TABLE 3.32

CORRELATION BETWEEN TOTAL S.A.T. SCORE (SEPTEMBER, 1979) AND PERCENTAGE OF TIME OFF-TASK IN ALL SUBJECTS INCLUDING RECESS WORK TIME

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	-.136
9	Boys	-.353
6	Girls	.480
24	Intermediate third graders	.031
16	Boys	.020
8	Girls	.122
25	Total Boys	-.084
14	Total Girls	.470
39	Total third graders	.156

TABLE 3.33

CORRELATION BETWEEN TOTAL S.A.T. SCORE (SEPTEMBER, 1979) AND PERCENTAGE OF TIME OFF-TASK IN ACADEMIC SUBJECTS

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	-.044
9	Boys	-.195
6	Girls	.407
24	Intermediate third graders	.039
16	Boys	-.011
8	Girls	.225
25	Total Boys	.038
14	Total Girls	.527*
39	Total third graders	.241

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.34

CORRELATION BETWEEN S.A.T. READING SCORE (SEPTEMBER, 1979) AND PERCENTAGE OF TIME OFF-TASK IN READING (INCLUDING TITLE I)

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	.397
9	Boys	.731*
6	Girls	.026
24	Intermediate third graders	-.128
16	Boys	-.094
8	Girls	-.243
25	Total Boys	.222
14	Total Girls	.217
39	Total third graders	.210

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.35

CORRELATION BETWEEN S.A.T. READING SCORE (SEPTEMBER, 1979) AND PERCENTAGE OF TIME OFF-TASK IN LANGUAGE ARTS INCLUDING READING AND SPELLING

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	.257
9	Boys	.620*
6	Girls	.007
24	Intermediate third graders	-.131
16	Boys	-.174
8	Girls	-.076
25	Total Boys	.098
14	Total Girls	.421
39	Total third graders	.204

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.36

CORRELATION BETWEEN S.A.T. SPELLING SCORE (SEPTEMBER, 1979) AND PERCENTAGE OF TIME OFF-TASK IN SPELLING

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	.344
9	Boys	.824*
6	Girls	-.227
24	Intermediate third graders	.026
16	Boys	-.183
8	Girls	.295
25	Total Boys	-.005
14	Total Girls	.276
39	Total third graders	.078

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.37

CORRELATION BETWEEN MATHEMATICS S.A.T. SCORE (SEPTEMBER, 1979) AND PERCENTAGE OF TIME OFF-TASK IN MATHEMATICS (INCLUDING TITLE I)

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	-.306
9	Boys	-.428
6	Girls	-.159
24	Intermediate third graders	-.029
16	Boys	.137
8	Girls	-.127
25	Total Boys	-.021
14	Total Girls	.033
39	Total third graders	.013

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.38

CORRELATION BETWEEN SOCIAL STUDIES AND SCIENCE S.A.T. SCORE (SEPTEMBER, 1979) AND PERCENTAGE OF TIME OFF-TASK IN SOCIAL STUDIES AND SCIENCE

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	.025
9	Boys	-.065
6	Girls	.090
24	Intermediate third graders	-.296
16	Boys	-.334
8	Girls	-.209
25	Total Boys	-.241
14	Total Girls	-.102
39	Total third graders	-.182

quite low, the primary unit's was positive and the intermediate unit's was negative.

When the achievement score for reading is correlated with off-task time in all the language arts subjects and reading, as shown in Table 3.35, the same pattern emerges as was seen in Table 3.34. The only group with a significant correlation again was the primary boys. Also, although the correlations were low, the intermediate unit again had a negative correlation coefficient in contrast to the primary unit's positive correlation coefficient.

If only spelling achievement and off-task time in spelling are considered, as shown in Table 3.36, again primary boys emerged as the only group for which there was a significant correlation. The correlation between spelling and off-task behavior was even higher for the primary boys than it was in the case of reading or language arts.

Table 3.37 depicts the correlation between mathematics achievement scores and off-task time in mathematics. The data indicate that there were no high correlations between the two variables for third graders of any unit or sex. It is of interest that, although most of the correlations are negative, that for intermediate boys was positive. These data suggest that except for intermediate boys, as ability in mathematics increased, the amount of off-task time tended to decrease.

The correlation of social studies and science achievement scores with off-task time in those subjects revealed relatively low correlations, as shown in Table 3.38. The correlation for all third graders was slightly negative except in the case of primary girls. The generally negative correlations suggest that as achievement levels in social studies and science increased, off-task behavior decreased. However, the coefficients were so low that little importance should be attached to them.

Academic aptitude, as reflected in students' IQ scores, can also be used as a measure of ability and as a third possible predictor of off-task behavior. Table 3.39 presents background data on IQ scores for all third graders and for each unit and sex. The IQ scores were relatively high and there was much overlap between the scores for each unit. The achievement test scores showed more variation between the units than did the IQ scores. As noted when examining the achievement score data, there must be factors other than test scores which determine the unit in which a child will be placed.

It should not be assumed that the students scoring highest in IQ also scored highest on the achievement tests. Table 3.40 reveals that the correlation between IQ and achievement, although positive and high, differed by unit and sex. The boys' IQ scores were not related significantly to their achievement scores, but the girls' were highly correlated. The intermediate girls' scores

TABLE 3.39

RANKING OF IQ SCORES ACCORDING TO UNIT AND SEX

	Primary Boys	Primary Girls	Primary Unit	Intermediate Boys	Intermediate Girls	Intermediate Unit	Total Third Graders
Individual Students	128	121		150	131		
	126	118		138	125		
	119	115		137	123		
	118	114		137	121		
	114	101		134	112		
	113	99		128	108		
	106	92		125	107		
	105			123	86		
	102			122			
				120			
				119			
				118			
				115			
				112			
				110			
				109			
Mean Score	114.55	108.57	119.93	124.81	114.12	116.4	117.5
Median Score	114	114	114	122.5	112	122	118
Range	26	29	36	41	45	64	64

TABLE 3.40

CORRELATION BETWEEN IQ SCORES AND TOTAL S.A.T. SCORE (SEPTEMBER, 1979)

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	.555
9	Boys	.381
6	Girls	.792*
24	Intermediate third graders	.650*
16	Boys	.380
8	Girls	.863*
25	Total Boys	.546
14	Total Girls	.823*
39	Total third graders	.670*

*Denotes correlations assumed to be significant by the researcher.

had a slightly higher correlation than did those of the primary girls.

When IQ scores were used as a proxy measure of students' ability levels, the picture was similar to that found when achievement test scores were used. IQ scores were a poor predictor of off-task time either for all subjects or only for academic subjects. Comparing Tables 3.41 and 3.42 with Tables 3.32 and 3.33 supports this observation. Only for girls was there a fairly high correlation between ability level and off-task behavior in all subjects. As for academic subjects, the only significant correlation for primary girls was with achievement test scores. When IQ test scores were used, there was a significant correlation only for intermediate girls.

A fourth variable that might be related to off-task behavior and useful for predicting its occurrence is the chronological age of students. Table 3.43 provides background information on the ages of all third graders by unit and sex. The average age of third graders at this school in September, 1979, was 101.6 months, or 8.4 years. However, the range of age was 17 months. The youngest third grader, an intermediate boy, was 93 months, or 7.75 years of age; the oldest third grader, a primary girl, was 110 months, or 9.16 years. Nevertheless, there was not a striking difference in the ages of students in the intermediate and primary units.

TABLE 3.41

CORRELATION BETWEEN IQ SCORE (SEPTEMBER, 1979) AND PERCENTAGE OF TIME OFF-TASK IN ALL SUBJECTS INCLUDING RECESS WORK TIME

Number of Students	Type of Students	Correlation Coefficient
16	Primary third graders	.213
9	Boys	-.028
7	Girls	.432
24	Intermediate third graders	.142
16	Boys	.111
8	Girls	.360
25	Total Boys	.056
15	Total Girls	.400
40	Total third graders	.245

TABLE 3.42

CORRELATION BETWEEN IQ SCORE (SEPTEMBER, 1979) AND PERCENTAGE OF TIME OFF-TASK IN ACADEMIC SUBJECTS

Number of Students	Type of Students	Correlation Coefficient
16	Primary third graders	.246
9	Boys	.098
7	Girls	.228
24	Intermediate third graders	.110
16	Boys	.070
8	Girls	.414
25	Total Boys	.118
15	Total Girls	.404
40	Total third graders	.266

TABLE 3.43

RANKING OF CHRONOLOGICAL AGE IN MONTHS (AS OF SEPTEMBER 1, 1979) ACCORDING TO UNIT AND SEX

	Primary Boys	Primary Girls	Primary Unit	Intermediate Boys	Intermediate Girls	Intermediate Unit	Total Third Graders
Individual Students	109	110		108.5	107		
	108	108		108	103		
	103	104.5		107	103		
	101	103		106	103		
	100	102		105.5	99		
	99	99		104	98		
	98	97		104	98		
	98	97		103	97		
	97			102	97		
				102			
				101			
				100			
				99			
				97			
				96			
				96			
				93			
Mean Age	101.4	102.56	101.9	101.8	100.5	101.4	101.6
Median Age	100	102.5	101	102	99	102	102
Range in Age	12	13	13	14.5	10	11.5	17

What is of interest are the various explanations of why students who are almost a year older than most third graders can appear in either unit. Some of the students, especially in the intermediate unit, were older because their birth date fell in November or December and thus they started school a year later than other children born in earlier months of that year. Other students, especially in the primary unit, were older because they had been retained in the first or second grade for an additional year.

Table 3.44 shows the correlations for off-task behavior in all subjects and chronological age, while Table 3.45 presents the correlations for academic subjects only. The correlations for all subjects were relatively low and were negative. Older third graders would tend to engage in less off-task behavior than would younger third graders. The highest correlation was that for intermediate girls, which might suggest a relationship between maturity and off-task behavior. The correlation for intermediate girls also holds if only academic subjects are considered. In those subjects the same negative correlation prevails for all third graders with somewhat higher correlations occurring for both intermediate girls and primary girls.

Absence

Absence must be treated in its own right and not merely as it correlates with off-task behavior because absence represents an

TABLE 3.44

CORRELATION BETWEEN AGE (AS OF SEPTEMBER 1, 1979) AND PERCENTAGE OF TIME OFF-TASK IN ALL SUBJECTS INCLUDING RECESS WORK TIME

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	-.297
9	Boys	-.381
8	Girls	-.123
26	Intermediate third graders	-.314
17	Boys	-.182
9	Girls	-.640*
26	Total Boys	-.248
17	Total Girls	-.449
43	Total third graders	-.310

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.45

CORRELATION BETWEEN AGE (AS OF SEPTEMBER 1, 1979) AND PERCENTAGE OF TIME OFF-TASK IN ACADEMIC SUBJECTS ONLY

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	-.309
9	Boys	-.266
8	Girls	-.555*
26	Intermediate third graders	-.266
17	Boys	-.099
9	Girls	-.643*
26	Total Boys	-.147
17	Total Girls	-.507*
43	Total third graders	-.282

*Denotes correlations assumed to be significant by the researcher.

extreme case of off-task behavior. The student is engaged in no instruction whatsoever on those days and so totally misses the learning opportunities he would otherwise have access to in school.

There was variation in the number of days students were absent, as shown in Table 3.46. However, these variations did not follow unit or sex lines. The range was 0 to 18 days of absence with an average of 6.9 days. There were many reasons for these absences. Some, of course, were due to illness, but others were related to family vacation, missing the school bus, oversleeping, or helping at home.

There may be other, less obvious, factors linked to absences, however. Correlations were calculated to determine if this year's absence rate for individuals was related to such variables as off-task time in school, the previous year's absence rate, students' age, achievement test scores, and IQ scores. These correlations are shown in Tables 3.47 through 3.53.

The number of days absent during the school year might be related to off-task behavior. These data are shown in Table 3.47 for all subjects. There were no high correlations between number of days absent and off-task time with the possible exception of intermediate girls. Interestingly, though, the correlation was negative for the intermediate unit and positive for the primary unit.

TABLE 3.46

RANKING OF NUMBER OF DAYS ABSENT ACCORDING TO UNIT AND SEX

	Primary Boys	Primary Girls	Primary Unit	Intermediate Boys	Intermediate Girls	Intermediate Unit	Total Third Graders
Individual Students	14	18.5		18	16.5		
	11	9.5		16	12		
	7.5	9		13.5	7.5		
	6.5	5.5		13	6.5		
	5.5	5.5		11.5	6		
	4	5		10.5	4		
	2.5	4.5		9	3		
	2.5	4		6	2		
	0			3.5	2		
				3			
				3			
				2.5			
				2.5			
				2			
				1.5			
				0			
Mean Absences	5.94	7.68	6.76	7.21	6.61	7	6.90
Median Absences	5.5	5.5	5.5	4.75	6	6	5.75
Range	14	14.5	18.5	18	14.5	18	18

TABLE 3.47

CORRELATION BETWEEN NUMBER OF DAYS ABSENT (1979-80) AND PERCENTAGE OF TIME OFF-TASK IN ALL SUBJECTS INCLUDING RECESS WORK TIME

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	.073
9	Boys	.316
8	Girls	.183
25	Intermediate third graders	-.393
16	Boys	-.311
9	Girls	-.575*
25	Total Boys	-.115
17	Total Girls	-.340
42	Total Third graders	-.203

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.48

CORRELATION BETWEEN NUMBER OF DAYS ABSENT (1979-80) AND NUMBER OF DAYS ABSENT (1978-79)

Number of Students	Type Students	Correlation Coefficient
16	Primary third graders	.305
9	Boys	.582*
7	Girls	.083
23	Intermediate third graders	.835*
15	Boys	.901*
8	Girls	.897*
24	Total Boys	.769*
15	Total Girls	.512*
39	Total third graders	.655*

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.49

CORRELATION BETWEEN AGE (AS OF SEPTEMBER 1, 1979) AND NUMBER OF DAYS ABSENT (1979-80)

Number of Students	Type Students	Correlation Coefficient
17	Primary third graders	.001
9	Boys	-.643*
8	Girls	.564*
25	Intermediate third graders	-.061
16	Boys	-.257
9	Girls	.445
25	Total Boys	-.350
17	Total Girls	.513*
42	Total third graders	-.038

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.50

CORRELATION BETWEEN TOTAL S.A.T. SCORE (SEPTEMBER, 1979) AND NUMBER OF DAYS ABSENT (1979-80)

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	-.297
9	Boys	-.291
6	Girls	-.383
23	Intermediate third graders	.137
15	Boys	.387
8	Girls	-.219
24	Total Boys	.225
14	Total Girls	-.200
38	Total third graders	.095

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.51

CORRELATION BETWEEN S.A.T. SCORE (SEPTEMBER, 1979) IN READING AND NUMBER OF DAYS ABSENT (1979-80)

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	.235
9	Boys	.174
6	Girls	.425
23	Intermediate third graders	-.046
15	Boys	.135
8	Girls	-.488
24	Total Boys	.207
14	Total Girls	-.192
38	Total third graders	.090

TABLE 3.52

CORRELATION BETWEEN MATHEMATICS S.A.T. SCORE (SEPTEMBER, 1979) AND NUMBER OF DAYS ABSENT (1979-80)

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	-.299
9	Boys	-.343
6	Girls	-.339
23	Intermediate third graders	.198
15	Boys	.404
8	Girls	-.107
24	Total Boys	.219
14	Total Girls	-.147
38	Total third graders	.093

TABLE 3.53

CORRELATION BETWEEN IQ SCORE (SEPTEMBER, 1979) AND NUMBER OF DAYS ABSENT (1979-80)

Number of Students	Type of Students	Correlation Coefficient
16	Primary third graders	-.165
9	Boys	-.459
7	Girls	.249
23	Intermediate third graders	.177
15	Boys	.367
8	Girls	-.246
24	Total Boys	.210
15	Total Girls	-.088
39	Total third graders	.079

As seen in Table 3.48, the correlations between absence rates for third graders during the present school year and the previous one were very high for intermediate unit students. The pattern of absence rates remained quite similar between the two years for the intermediate unit but not for the primary unit, although the correlation was higher for boys than for girls in the primary unit.

When chronological age was correlated with the number of absences (as shown in Table 3.49), there appeared to be little relationship between the two, with the possible exception of primary girls. The negative correlation for primary boys suggests that younger boys missed more days of school than did older primary boys.

As seen in Tables 3.50 through 3.52, when achievement test scores were correlated with the number of absences, there were no high correlations for either total test scores or for reading or mathematics test scores independently. Among third graders, lower scores appeared to be associated with higher amounts of absence, but the correlations were not high.

IQ scores were not related significantly to the number of days of absence for a student, as shown in Table 3.53. Once again, it was only for primary unit boys that there was evidence of a correlation. Since the relationship was negative, it suggests that boys with lower IQ scores were absent more frequently.

The Actual Use and Control of Student Time by Students and/or Administration and Faculty

There are two portions of the day during which student time might be either controlled by adults or students. Circumstances determine who will decide how a student's time is used during recess and during free time.

Recess

Recess was scheduled to be the portion of the day during which students were able to largely determine their own behavior as long as that behavior took place on the playground. Students were free to play individually or in groups, to use the equipment available or to bring their own, and to play standard games or devise their own. They did not have to engage in play; they could just talk to one another. Each unit had recess at a different time from the other units in the morning and afternoon, so the primary and intermediate third graders could not mix during those recesses. However, the noon recess following lunch permitted the two groups of third graders to be in each other's company if they wished. Although the primary unit's noon recess did occur earlier and ended sooner than the intermediate's, there was at least a half hour of overlapping time when all the students were likely to be on the playground together.

For various reasons, not all students received outside recess every day. All the students might be kept inside for all or some of the recess periods on days with bad weather. Although inside recess was still essentially student-controlled time, it had different uses from outside recess. On other occasions, students lost the privilege of having morning or afternoon recess if they were behind in their work in academic subjects or if disciplinary action was imposed. The teacher generally determined the students who had to forfeit their recess. However, there were instances in which students requested to stay in during recess, and the teacher generally permitted the individuals to do so.

The decision about whether the conditions outside were bad enough to keep students in during recess was made by the principal and announced to the whole school shortly before the recesses were scheduled to occur. Both teachers and students learned of the decision at the same time. The uses of this compulsory inside recess were varied. Quite often before morning or afternoon inside recess, the teacher felt less pressure to complete the ongoing activity before the recess buzzer sounded. Students were allowed to finish their work during the first few minutes of inside recess. Occasionally, some students wished to continue working through the entire 15-minute recess period, but that was generally difficult because all of the noise and activity was likely to distract the child. Each classroom had boxed games that students could play during recess within their classroom area. Students could just talk to each other as well. In the primary unit the whole class sometimes played a game like "7-Up" or "I see something and the color of it is . . . ." Inside recess also provided students with the opportunity to go to the IMC for the entire time or for a portion of it. Normally they could not go to the IMC when there was outside recess.

Noon recess inside the building was different from the morning or afternoon inside recesses. One unit was allowed to use the gymnasium while the other two units had to return to their classroom areas after lunch was over. There they could play games, talk quietly, or even read. The IMC was always closed during the noon recess. When noon recess was spent indoors, the recess period was shortened by ten minutes. The afternoon classes did not begin early, however, for the extra time was to be devoted to silent reading or if not to reading, at least to silence. It was not unusual for a child to spend the entire ten minutes "digging" inside his desk or simply gazing around the area.

Of the 51 days spent observing in the intermediate unit, one or more of the recesses was spent indoors on 14 of those days. On 13 of the 14 days, the noon recess was among those spent inside. The first inside recess of the year occurred on Friday, October 19, and was regarded as an interesting change by the students. By spring, however, students were increasingly disappointed if the weather did not permit them to go outside for recess. Fortunately, this rarely occurred since the spring weather was not as rainy as in previous springs. Teachers felt that the students were less distracted this spring because they were able to spend almost all their recess periods outdoors. The weather was so pleasant that teachers increasingly allowed students to stay outside a few minutes longer or to leave a few minutes earlier for recess. On one Friday, the primary third graders were given an extra 15 minutes for outside recess in place of handwriting.

Morning and afternoon outside recesses were each scheduled to last 15 minutes but, in fact, they each lasted at least 20 minutes, even on days when the recess was spent inside. In winter time the students needed the extra minutes to attire themselves in the appropriate apparel to withstand the cold and then to take off their garments when they came in again. However, as the days became warmer and extra time was no longer necessary for putting on coats and boots, the amount of time allotted for recess did not return to the scheduled 15 minutes. The bell that sounded at the end of the 15-minute recess period served as a warning that students should return to class, but they were not expected to be in already when it sounded.

Not all students had morning and afternoon recess. Those who were behind in their work in academic subjects often had to remain inside to make up their work. Noon recess was never taken away, however. When students were required to stay in during the short recesses, the teacher stayed in the classroom to supervise them at least part of the time. Especially in the primary unit, the teacher used this as an opportunity for one-to-one instruction for students who needed individual help to catch up in their work.

The names of students who had to stay in during recess were listed on the board each day. In the intermediate unit, only the morning recess period was used regularly for the completion of work. Rarely did a student have to remain inside during the afternoon recess. Also, if the work did not require the entire recess period for completion, the student could go out when the work was done. In the primary unit, however, the list of names was always longer, and there were always children kept inside during recess unless the teacher excused them to go out that particular day. Virtually all the primary third graders failed to complete reading assignments and book reports at some point during the year and were deprived of recess until their work was completed. As the year progressed, one primary boy lost a majority of his recess periods. Even with the extra half hour per day available from these recess periods, he rarely made enough progress to be allowed out for recess the next day. For each unit, the number of students required to stay in during recess increased after the Christmas holidays as the work became harder and as the amount of work increased toward the end of the year. Also, students who had been absent were at times required to stay in to finish work they had missed.

Table 3.54 presents individuals' percentages of recess time spent working on the observation days. The percentages are organized according to unit and sex. The range of variations runs from 77.33 percent down to zero. Although the primary boys had the highest mean at 29.18 percent, there were some boys in that group who did not need extra work time. In fact, in each group there were some individuals who did not need more time. The primary boys used almost twice as much recess time to finish assignments as did primary girls who used 17.66 percent of recess, while in the intermediate unit the girls at 5.62 percent needed slightly more time than the boys at 4.31 percent. In the intermediate unit the mean percentages for both boys and girls were considerably lower than in the primary unit. Intermediate girls used only one-third of the time needed by primary girls to finish their work, while intermediate boys used only about one-seventh of the time needed by primary boys. A comparison of the lower mean for the intermediate third grade with the higher mean for primary third graders reveals a difference of 19 percentage points in the amount of recess time required to finish work.

Although unfinished assignments provided the main reason for depriving students of a recess period, the loss of all or part of recess was also used as a disciplinary measure--either for the entire class or for individual students. Generally, it was boys who were kept in because they did not obey the teacher's directions.

TABLE 3.54

RANKING OF PERCENTAGES OF RECESS TIME SPENT WORKING BY INDIVIDUALS ACCORDING TO UNIT AND SEX

	Primary Boys	Primary Girls	Primary Unit	Intermediate Boys	Intermediate Girls	Intermediate Unit	Total Third Graders
Individual Students	77.33	57.33		17.33	26.66		
	58.66	40.00		14.66	9.33		
	49.33	18.66		8.00	6.66		
	37.33	16.00		8.00	6.66		
	21.33	9.33		6.66	1.33		
	18.66	0		5.33	0		
	0	0		4.00	0		
	0	0		4.00	0		
	0			2.66	0		
				2.66			
				0			
				0			
				0			
				0			
				0			
				0			
				0			
Mean	29.18	17.66	23.76	4.31	5.62	4.76	12.27
Median	21.33	12.66	16.00	2.66	1.33	2.66	4.00
Range	77.33	57.33	77.33	17.33	26.66	26.66	77.33

Recess periods could be lost for a day, or even a week. In the primary unit if the child was already required to stay in during recess to finish work, then a disciplinary recess sentence could not be served simultaneously but was added on after the remedial recesses. During the disciplinary recess, the student could go to the IMC or stay in the classroom. Students who were required to stay in during recess often spent part of the time talking to each other and rarely spent the whole period working.

Tables 3.55 through 3.57 provide correlations between the percentage of recess spent completing assignments and achievement test scores, academic off-task time, and number of days absent, variables which were thought to be possible predictors of the students who were most likely to be required to spend their recess periods inside working. Table 3.55 presents the correlation for achievement test scores. The correlation for all third graders was not significantly high but was negative. However, there was a significantly high correlation for primary third grade boys which suggests that those boys with lower achievement test scores tended to spend more time working during recess.

The percentage of off-task time in academic subjects showed relatively little correlation with the percentage of recess time required for completing assignments. These correlations are shown in Table 3.56. The explanation for this finding is that students who engaged in off-task behavior in academic subjects were usually

TABLE 3.55

CORRELATION BETWEEN TOTAL S.A.T. SCORE (SEPTEMBER, 1979) AND PERCENT OF RECESS SPENT COMPLETING ASSIGNMENTS

Number of Students	Type of Students	Correlation Coefficient
15	Primary third graders	-.307
9	Boys	-.658*
6	Girls	.422
24	Intermediate third graders	-.271
16	Boys	.244
8	Girls	-.406
25	Total Boys	-.658*
14	Total Girls	-.197
39	Total third graders	-.488

*Denotes correlations assumed to be significant by the researcher.

TABLE 3.56

CORRELATION BETWEEN PERCENTAGE OF TIME OFF-TASK IN ACADEMIC SUBJECTS AND PERCENTAGE OF RECESS SPENT COMPLETING ASSIGNMENTS

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	.334
9	Boys	.323
8	Girls	-.013
26	Intermediate third graders	.326
17	Boys	.361
9	Girls	.282
26	Total Boys	.124
17	Total Girls	-.226
43	Total third graders	.005

TABLE 3.57

CORRELATION BETWEEN NUMBER OF DAYS ABSENT (1979-80) AND PERCENTAGE OF RECESS SPENT COMPLETING ASSINGMENTS

Number of Students	Type of Students	Correlation Coefficient
17	Primary third graders	.641*
9	Boys	.687*
8	Girls	.803*
25	Intermediate third graders	-.178
16	Boys	-.252
9	Girls	-.091
25	Total Boys	.149
17	Total Girls	.477
42	Total third graders	.251

*Denotes correlations assumed to be significant by the researcher.

the ones who had completed their work. Those who needed recess time to finish work usually were slower workers for whom the time allocated for a particular subject was simply insufficient even though they were on-task.

As seen in Table 3.57, the correlations between the number of days absent and the percentage of recess spent completing assignments were positive and high for both boys and girls in the primary unit. Conversely, the correlations for the intermediate unit third graders were quite low and were negative. The students who had to remain inside during recess periods in the intermediate unit were rarely the students who had been absent. Their absences seemed to have little impact on their ability to finish their work.

Free Time

Free time could occur in any of the academic subjects when students were working individually and completed their assignments before the allotted time was up. The label "free time" was one that both students and teachers used, but it is questionable just how free that time was. Having "free time" generally meant that a student had an opportunity to participate in a teacher-approved, and even teacher-designed, activity which was optional and for which no grade would be given unless for extra credit. There was also a variation of "free time" which could best be described as time used to complete other assignments, either in the same subject or in a different subject, when the current assignment was completed.

The first type of free time with its attendant choices was experienced more frequently by some children than by others. The children who worked rapidly, and who did not assume that the teacher intended that an assignment necessarily take the entire period, had more free time. Generally, this type of free time occurred in mathematics and reading in both units. There were a greater variety of possibilities for spending free time in the primary third grade than in the intermediate. The fact that the primary third graders were in the same classroom area for all of their academic subjects meant that all of the resources of the room were available for their use. This was not the case in the intermediate unit. The primary unit had more options largely because in that unit the students were more likely to have free time.

In the primary third grade unit free time in reading was a relatively frequent occurrence for all but a few individuals. During this time, however, students were expected to sign themselves out to the IMC to check out books for their weekly book report and for the Wednesday free reading period. While in the IMC, there were other diversions, too, such as filmstrips, displays of projects done by other classes, new issues of magazines, and children from other classes. On one occasion, confusion developed concerning when a student who had no free time during reading on Wednesday could go to the IMC to get the book required for that day's free reading. He could have gone the previous day but did not realize at that time that he was not going to have free time on Wednesday to obtain the book. He decided to go during recess, but without the teacher's permission, and was punished as a result.

Other uses for free time in the primary unit in both reading and mathematics included doing activities suggested on activity cards and then checking one's name off on a chart as they were completed. Also, there were usually "funsheets" on the back table for those who finished early. The teacher obviously expected some students to finish early and rather than going on to the next lesson, she preferred that they occupy themselves for the remaining few minutes with a worksheet related to an upcoming holiday or to the current season of the year. At times, these sheets required scissors, glue, and crayons, but all students were expected to have these materials in their desks. Another option for the use of free time was provided by a learning center which might consist of a filmstrip or a display of books and/or objects related to the current social studies or science unit.

Students in the intermediate third grade unit certainly had free time, but they had few options in the use of free time and occasionally had nothing to do unless they thought up some individual activity on their own. In mathematics, students generally worked on flashcards individually or in pairs, and there were also some mathematics games available. In reading, language, and spelling, however, students were often told that if they finished their work, they should find something to do quietly for the remaining few minutes. This might be either drawing or getting a book out of one's desk, but usually it meant just sitting and, if possible, talking to a neighbor, especially as the year drew to a close. When free time occurred in language arts, a student could finish drinking his milk while sitting at his desk. For the students who were in the same classroom area for spelling and language as for reading, there were extra credit reading sheets available in the back of the room. However, if a student was in the high-ability class and thus went to a different area for reading, there were no extra credit sheets available if free time occurred in spelling and language.

Although there were other options available, they were not often utilized. Generally, a learning center was established for the current science or social studies unit, but as in the primary unit, once this activity was completed it no longer was available as an option for using free time. Students in the intermediate unit did not go to the IMC during their free time as often as those in the primary unit because they had fewer required book reports and did not have a free reading period for which they would need a book each week. In addition, they always had to seek their teacher's permission to go to the IMC, and if she was working with a group of students that was not possible. On occasion, students were unaware of the amount of time remaining in the period. When they finished an assignment and went to get some other resource available in the room, they often were told that since there were only a few minutes remaining, they should not start a new activity.

For each unit, the second type of free time (which was really catch-up time) could displace any of the first type of free time activities. If students had a writing assignment or a book report to work on, this could also be done after the current period's assignments were completed. Sometimes there was an overlap between catch-up time and actual free time so that the two occurred simultaneously in one class but for different children. When the entire class was given catch-up time, there were always some students who did not need it so that bit of time automatically became free time for them.

CHAPTER IV

PART I: THIRD GRADERS' PERCEPTIONS OF SCHOOL TIME

In an attempt to locate further explanations for why third graders might use time as they do, patterns in their perceptions of school time need to be examined. These perceptions of blocks of school time, control of school time, and friends and school time might help explain why students use time as they do. The data provided here present the group norms in perception. Although some variations among individuals will be discussed in this part, most individual variations will be treated in Part II.

Blocks of School Time

The School Year

Familiarity with the months and with the length of the school year and the regular year cannot be assumed on the part of third graders although a unit on time is taught in the second grade and again at the end of third grade. As seen in Table 4.1, slightly over half of the 42 third graders were able to name the 12 months in order of occurrence. Proportionately more of the intermediate third graders were able to name the months in order than were the primary third graders. With the exception of one primary third-grade boy who only knew five months out of order,

TABLE 4.1

ABILITY OF THIRD GRADERS TO LIST IN ORDER THE MONTHS OF THE YEAR

Type of student	Distribution of Student Responses by Category						
	Knew all months of year in order	Knew all months of year but not in order	Knew 10 or 11 months in order	Knew 10 or 11 months but not in order	Knew 8 or 9 months in order	Knew 8 or 9 months but not in order	Knew 5 months out of order
Primary Boys	3	1		3		1	1
Primary Girls	4		1		1	2	
Total Primary	7	1	1	3	1	3	1
Intermediate Boys	10	1	1	1		3	
Intermediate Girls	8				1		
Total Intermediate	18	1	1	1	1	3	0
All Boys	13	2	1	4	0	4	1
All Girls	12	0	1	0	2	2	0
Total Third Graders	25	2	3	4	2	6	1

all third graders knew the names of at least eight months of the year although not necessarily in order. Only 52 percent of all the boys could name the 12 months in order while 70.5 percent of the girls could name them.

Surprisingly, two of the children who could not name the 12 months forgot to include the month of their own birthdays. The primary boy who could name only five months was one of these while a primary girls who could name eight or nine months out of order was the other.

The order and names of months are not firmly fixed in children's minds in the third grade. One primary boy noted that some days he could remember the months and some days he could not. The children did not attach any particular importance to knowing the months of the year; this bit of knowledge had no greater priority for remembrance than any other aspect of school learning.

Students did not yet have a firm grasp of the length of the school year either. Those who were willing to guess said between eight and ten months. Others who would not guess at all believed they had no basis for guessing; the concept of calculating time rather than regarding it as merely something in the environment to be remembered had apparently not occurred to them. The primary boy who had to stay in during recess more often than any other child was not sure about the duration of the school year because some years seemed to go fast and some seemed to pass slowly;

therefore, they could not each last the same amount of time. This year definitely was a slow year!

The perceived differences between this year and the previous year were based on the increased difficulty of the work for the students rather than on differences in the daily schedule or in their teachers. In each unit several lower ability students who appeared to be more spatially than temporally oriented found the big difference to be that they were in a different room from the previous year. Only a few of the highest ability students in the intermediate unit regarded the change in their schedules as representing a significant difference between the current year and the previous year.

As for the months when school began and ended, third-grade students had a fairly clear idea about this. They did not always know if it was in August or September that school began, but that was not surprising since the starting date usually vacillated between these two months. The same problem occurred with the months at the end of school; some thought it was May and others June. In most years it was June, but this year there were no snow days and so school was out in May.

The intermediate third graders were better at accurately estimating the number of months they had been in school than were the primary third graders. This latter group tended to either underestimate the amount of time they had been in school or to believe it was impossible to figure out.

Generally, the students thought of the time in school as being marked off in months, but there were alternatives to this organizational approach. The school year could also be divided into four grading periods or two semesters. However, the exact length of a grading period or a semester remained a mystery.

The favorite part of the school year for third graders was a time when the routine schedule was somehow disrupted but not rearranged. These disruptions could be caused by the arrival of parties, vacations or holidays, Friday afternoon and the upcoming weekend, the onset of snowy weather, field trips, recesses, and the start of summer vacation. The beginning of the school year was still fresh and new and the monotony of routine had not yet set in.

In perceiving the school year, it was much easier for students to correctly estimate how many months ago Christmas occurred than to predict how long it was until the end of the school year, even when the two events were equidistant from the current moment. Only the higher ability students would attempt to calculate the number of months until the end of school. Teachers were much more aware of just how far away the end of school was as the year progressed, but third graders seemed seldom to be able to think further than a week ahead at most. Rarely was a third grader aware of upcoming holidays unless they were within a week of happening. Primary third graders were especially uncertain about how close

Valentine's Day was even when it was only two days away. Just asking them if they were sure of their answers could evoke a totally new response. Interestingly, some articulate third graders expressed the view that they did not see much point in knowing about the future because they were not in control of it; the teachers were.

Third graders were aware of the particular point in time at which they were presently, even if they could not relate it to past or future time. Knowing the correct date could be expected of third graders. Those few who made occasional mistakes usually gave the date of the previous day. The students who absolutely did not know the date were among the lowest in ability level. One interesting case of a child who did not know the date was the primary boy who spent almost all recess periods inside. Since every day was virtually the same for him, it probably did not matter to him what the date was. The one intermediate boy who gave the date of the following day instead of the correct one exhibited divergent behavior in the classroom that suggested he really was ahead of most other third graders.

The one date third graders did know correctly was the day and month of their own birthday. This was a fact and could be remembered rather than calculated. The pleasant memories children associated with their birthdays guaranteed that these could not be forgotten. The year of their birthdate was another matter. The same few low-ability students who generally were baffled by time refused to even try to calculate the year of their birth, even though they knew their own age. Two of them found no conflict in choosing 1979 or 1980 as their year of birth. The oldest third grader, an artistic primary girl, was willing to give her older sister's year of birth but claimed she did not know her own.

Thinking beyond the current school year was not a natural phenomenon for most third graders. When faced with the prospect of what they might like to do when they finished school, low- or average-ability boys were more likely to respond in terms of what they were going to do that day immediately after dismissal than what they would do after high school or college. However, they, along with most third graders, were able to express thoughts on what career they might pursue after all their years in school were completed. Although both intermediate and primary girls wanted to be nurses and teachers, the expectations of high ability and lower ability boys differed. Primary boys and lower ability intermediate boys did not think of occupations that required a college education while higher ability boys did. The highest ability third-grade boys tended to visualize the future in a more individual and realistic way and wanted to be white-collar professionals rather than football players or policemen like the lower or average ability boys desired.

The School Week

Although the schedule for each school week was perceived as being the same, weeks themselves were not regarded as the same by third graders. How weeks were distinguished from each other was a fairly personal matter, though. Whether social studies or science was being taught and which teacher was teaching it differentiated weeks into two-week time blocks. Whether a project was underway in social studies or science was important, too, in giving a distinct character to a week. The Thursday movies created the main difference between weeks for some students. For primary third graders especially, weeks could be distinguished on the basis of whether they were easy or hard. Being absent could also affect the perception of differences between weeks. For some students the weather had an impact on experiences each week as well. How well one got on with one's friends or whose team was winning in the before- or after-school sports served to differentiate one week from another.

Despite the claim that weeks could be differentiated from one another, the previous week always seemed almost indistinguishable from the current one. As for the upcoming week, it was an unknown entity and third graders would rarely hazard a guess as to what it would be like. Only a few boys were confident enough to describe the probable activities and events of the next week. Apparently third graders kept expecting some intervening force to change the routine despite their professed experience that every week's schedule was the same.

Third graders were much more willing to describe the next day in school than to describe the next week. The next day was regarded as likely to be very similar to the current day. Any differences cited between the current day and the next were presented optimistically as things which tomorrow would have that today did not have. Only a few primary boys and intermediate girls refused to think about the next day. Some of the intermediate boys, but not those of the highest ability, volunteered a detailed schedule of the order of events for the following day.

Interestingly, despite the fact that intermediate boys were the most proficient at and most confident in predicting the next day's events, they found it almost impossible to describe the previous day. Only an unusual event like a fight or staying in during recess for illness stood out as memories about yesterday. Girls and primary boys were more able to talk about yesterday than they were tomorrow, but their descriptions of the previous day dealt with differences in special subjects or, especially for intermediate girls, with personal incidents involving friends.

The favorite day of the week for third graders was Friday. However, Wednesday was the favorite day for those few who had an after-school activity such as piano lessons or choir on that day. Friday was the favorite day, not only because it was the last day of the week, but also because of the sort of activities that took place in school on Friday. The Friday afternoon homeroom with its low-risk fun events and art class which some students had on Friday helped make that day of the week especially attractive. The use of the Weekly Reader instead of ability-grouped instruction in reading was also regarded as a positive feature of Friday by intermediate third graders. The fact that Friday night was regarded as a good television night further enhanced the appeal of Fridays.

The School Day

The third graders' perception of their school day has numerous aspects. Both how they perceived the day as a whole as well as how they perceived parts of the day must be considered.

There was quite a difference between intermediate and primary third graders in their ability to determine the basic daily schedule. The intermediate students had no problem with this, but both boys and girls in the primary third grade had a hard time determining the daily schedule. Invariably, storytime with milk was left out of their description of the day, which is surprising considering children generally did not forget a portion of the day associated with food. Special subjects also were often omitted, although these subjects were among the children's favorites. They had less difficulty trying to describe the events of the morning which had just occurred than in telling what would happen that afternoon. Only the very highest ability third graders were able to not only describe the order of classes in their daily schedule but also tell the time at which each class began and ended.

Although most third graders could not state the clock times for when specific classes began and ended, they were aware of how long classes were relative to other classes. Reading was the longest class for both units, and most students perceived that fact correctly. The third graders were able to judge that reading lasted between one and one and one-half hours depending on the day of the week. Not surprisingly, those who overestimated its duration were those who did not like reading. Those students who did not know the actual number of minutes that reading lasted determined that it was the longest because it was the class they liked least. Social studies/science was regarded as the longest class by several students because they did not care for it. The long noon recess was regarded as the longest class by one primary girl for whom the main reason for school seemed to be to have recesses; other activities just filled the space between the recesses.

Determining the shortest class was much harder since several short classes were fairly similar in length. Accurately differentiating between amounts of time which differed only by a few minutes was almost impossible for third graders. The students' perception of the shortest class was closely aligned with the one they thought was the fastest. Mathematics was not the shortest class in either unit but it was regarded as such. The few variances from this answer revealed that an alternate way of perceiving which was the shortest class was according to which class was one's favorite and therefore seemed to go most swiftly regardless of actual length.

Few students felt that any class lasted too long. The longest class was not considered to be too long by intermediate girls and one intermediate boy, all of whom were in the high-ability reading class. Mathematics went too slowly, and therefore was too long, for two primary boys. One intermediate and one primary boy did not care for art and therefore it lasted too long. Also, a few intermediate girls thought social studies/science was too long.

Students were more interested in the possibility of lenghtening short classes than in shortening long classes. Intermediate third graders felt language did not last long enough while primary boys wanted physical education, and occasionally social studies/science, to be longer. Primary girls would lengthen subjects like homeroom and Title I classes where they received more individual attention and more opportunity to talk. In both units the lowest ability students wanted more time to finish mathematics.

Despite the fact that lunch and noon recess were eagerly awaited by students, not all students knew how long this period actually lasted. Lower ability students either tended to have no idea at all about its duration or over- or underestimated it. One intermediate boy who overestimated its length by an hour seemed especially dependent on adult approval for activities.

Students had no trouble recalling on which days of the week they had art, music, or physical education. They were aware that they had each special class for a total of one hour each week. The order of occurrence of the specials during the week was a fact students had committed to memory, and it was easy for them to run through the days of the week and associate the day of the week with the appropriate special class. Only three higher ability students chose to name the particular special and then to say on which one or two days of the week it occurred. This means of answering demanded more organization in their understanding of their environment.

Students were aware of what to do next during the day because they had memorized the order of the subjects. It took about two weeks at the beginning of the school year to fix the schedule in one's memory. From then on students had a certain sense of control over the day's events. Those children who did not have especially strong relationships with other children, however, had less confidence in their ability to know what was going to happen next. They were the ones who relied on cues from the teacher to know where to go next. Primary boys especially expected the teacher to tell them what would be the next activity for the day.

The length of the school day tended to be estimated correctly most often by the intermediate third graders but not by the highest ability boys, for they thought the day was shorter than it actually was. They thought it was between five and six hours long. In both units, students who seemed to be having trouble getting their work done thought the school day was either much longer or much shorter than it actually was. One primary boy believed it to be 12 hours long. An intermediate girl thought that it was three hours long and one intermediate boy, who always seemed to be in a world of his own originally thought the day was 16 hours long and then finally settled on ten hours. These latter two students had achievement scores that were more similar to those of primary third graders than to other intermediate third graders.

As for what time school began and ended each day, third graders were more aware of when school ended than when it began. The intermediate third graders who had been in the primary unit in this school the previous year for second grade knew that the primary third graders had a shorter day, but they were not envious of this. Unless primary third graders had close friends or neighbors who were in the intermediate unit, they were not aware of the difference in the length of the intermediate unit's day. By the time primary third graders had put on all their winter attire and were ready to depart, the intermediate unit students were just arriving at the area for coats in their unit; therefore, the slight difference in dismissal time could easily be regarded by primary third graders as so insignificant as to escape their notice.

The determination of when the day began depended on whether the child considered school as starting from the moment he arrived on the playground outside or when he was inside the building. It was mainly boys who thought that school started slightly earlier than it did because they included playground activity. Third-grade girls tended to perceive the day as beginning when the first class began.

Despite the fact that third graders knew that each day lasted the same amount of minutes and hours as every other, some school days seemed to go faster or slower than others. Not surprisingly, Fridays were fast days and Mondays could be slow days. Bad days when everything went wrong were slow days, too.

Some days were busier than others, too. At least once a week a busy day turned up--largely because of the teachers' decisions about assignments for that day. However, not all busy days were the result of what seemed an overload of work. Cleaning out one's desk could create a busy day even though that activity lasted only a few minutes. Party days could also be considered busy days because so much extra seemed to be put into the schedule.

Just because one student was having a busy day did not mean all students were having one that day, though. Some subjects were "busier" than others and what happend in those subjects often established whether the day was busy or just routine for individual students. Reading and mathematics were the primary subjects that helped determine whether a day would be busy. Busy days were relatively personal; if they were shared, it was by students in a particular reading ability group who were given the same boardwork assignments in addition to the usual text and workbook assignments.

No one day of the week was characteristically busy. Busy days could occur on any day of the week. The Title I students in the primary unit tended to find the days when they went to extra classes to be busier days because they had a hard time getting all of their work done in the regular classes. At times the degree of busyness of a day was determined by the amount of confusion it created. Friday afternoon's flexible schedule had the greatest potential for creating busy days because of confusion about the activities planned for that time.

Busy days and boredom were not mutually exclusive. Hard work could lead to boredom. The other extreme, having nothing to do, could lead to boredom, too. Boredom could happen in any subject apparently except in physical education and music. In those two half-hour length classes the teachers were in constant control of children's behavior, and there simply was no opportunity for boredom.

There was no decided preference for the morning or afternoon among third graders either as a whole or by unit or sex. Yet the explanation as to why morning or afternoon was chosen as the preferable part of the day was based on the child's perception that it was the more interesting, faster moving part of the day. Those students who liked the time to be filled with short subjects that made the time appear to go faster chose the morning as the favorite in the intermediate unit. Those in the intermediate unit who thought time went faster when there were fewer subjects chose the afternoon. The primary unit had morning and afternoon schedules that were similar in terms of number of classes provided, so students in that unit chose morning or afternoon as faster depending purely on their individual perception of whether their favorite classes, which naturally went faster, occurred in the morning or in the afternoon. If reading and mathematics were regarded as fun and fast, then the morning went faster. If the specials and handwriting and social studies/science were the most interesting to an individual, then the afternoon went faster.

The favorite time of day was not described as a block of time like morning or afternoon, though. Third graders were specific about the time of day that was most appealing to them. Their favorite times were those that required the least supervision from adults. As a result, lunch, recesses, and afternoon dismissal were the predominant favorites. Those rare subjects that were equated with the favorite time of day for the primary unit were either special classes or social studies/science where there was no pressure to finish independent assignments as there was in most of the other academic subjects. In addition, social studies/science had the added glamour of being the last class of the day. For the intermediate unit, language and spelling which both provided the potential for free time when one finished the daily assignment, were also selected along with specials as favorite times of day.

Essentially any subject or portion of the day that was deemed by an individual third grader as providing an opportunity for fun, novelty, and/or swift completion of new assignments was the part of the day to which he/she looked forward. Although lunch and recess were the favorite portion of the day for most third graders, these were not the portions of the day that students actually looked forward to. They were pleasant, relaxing moments but there was no mystery about them. Rather, third graders looked forward each day to classes that were predictably unpredictable but which involved little degree of risk of being right or wrong.

Except for the lower ability girls in both the intermediate and primary units, third graders felt they had enough time to do assignments. They might not finish the assignment on the day it was given but they were confident that there would be time to finish it the next day if necessary. Even the primary third-grade boy who had to remain inside during most recesses believed he had enough time to do assignments. This perception of having enough time does not mean that students always finished their work by the deadline; rather it indicates the perception that deadlines were flexible, or that extra time could be found at recess time, tomorrow, or at home to finish the work. Teachers were regarded as benevolent in doling out quantities of time. Except for lower ability girls, students did not feel themselves to be rushed. Even these girls agreed with other third graders that they did not have too much to do in school. The very few students who felt they had too much to do felt this way only about one subject or on an occasional day.

The necessity of having homework was an individual matter. Estimates of how often it occurred and how long it took to complete homework varied. Homework occurred once or twice a week for a weekly total of one-half to one hour for most third graders. Lower ability students claimed to have either much more or much less homework than other third graders. Mathematics was the subject most likely to create homework for intermediate third graders, and reading was the subject most likely to do so for the primary third graders.

If third graders finished their assignment in a subject at school, free time resulted. This was likely to happen two or three times a week in reading for primary third graders and in spelling and language according to intermediate third graders. A trip to the IMC was the favorite use of free time. Playing educational games, drawing, doing extra-credit worksheets, and finishing work in other subjects were also possible uses for free time. Going to the IMC was the most likely choice of a free time activity among primary third graders. Although intermediate third graders were more creative in thinking up alternative possibilities for the use of free time, it was the primary unit which actually had the greater number of alternatives.

Control of School Time

These third graders expressed no antagonism toward school. The lower ability students were enjoying it as much as the higher ability students. Learning new things was the major attraction of school for the children. What they did not like about school was related to either having too much time or not enough in a subject or the limited amount of freedom they were allowed by the activities in a particular subject. Higher ability students did not like subjects where they had too much free time or where they regarded the activities as too regimented or routine.

Intermediate boys and primary girls were the most positive about school, for they had the most difficulty thinking of specific aspects that were least enjoyable. Intermediate boys and primary boys were positive about most aspects of school, especially the opportunity to learn; however, primary boys did not like hard assignments or mathematics. Girls tended to be more specific about the likeable aspects of school. Intermediate girls especially liked the opportunity to be with their friends, and they disliked reading. That was the longest class and provided little opportunity for interaction with other children, since free time rarely occurred in intermediate reading classes. Primary girls expressed no displeasure with reading but did not include it among the most enjoyable aspects of school. They had a hard time thinking of anything they disliked about school. In contrast to primary boys, primary girls regarded art, music, and mathematics as extremely enjoyable while the primary boys found these to be among the unpleasant features of school. Although third-grade boys tended to like subjects that allowed for either physical activity or learning facts while girls liked subjects that provided an opportunity to be with friends or where process skills were learned, both sexes preferred classes that appeared to give them a degree of autonomy.

Third graders rarely expressed a desire to make changes in their schedules or in the school. Suggested changes in scheduling involved shortening the least-liked classes and lenghtening favorite classes. All changes were minor in terms of the number of minutes to be added or subtracted from a subject's duration. Aside from two primary boys--one who wanted more art and physical education to replace music and one who wanted to abolish mathematics--there was no thought of doing away with a subject totally or reducing the number of days it occurred each week. Third graders did not advocate the institution of daily parties or all-day lunches or recesses and presented reasons for any changes they might suggest.

Still, the adults had designed the schedule the way they thought was best for the students and that was as it should be according to the students. Teachers were assumed to be the adults in charge of students' schedules. However, the principal and the unit leader were also regarded as having some say on scheduling.

Interestingly, in the primary unit the responses were almost evenly divided about the three possible people who could be in charge of the schedule. In the larger intermediate unit, though, only five boys thought someone other than the teacher was in charge and two other boys claimed to have no idea. Four of the five boys believed it was the principal who was responsible for scheduling, and the other thought it was the unit leader.

What does the principal do, according to the children, if he does not do the schedules? He makes rules, keeps order, talks on the phone, and pays bills. The primary third graders had a more positive attitude toward the principal's role in the school and were able to recall events which involved his interaction with students in some activity such as the school snowball fight that was fun. Although third graders from either unit were rarely called to the principal's office, there was definitely more fear of the principal expressed by intermediate third graders, who saw him as the man who makes sure everyone followed the rules.

Substitute teachers were not appreciated by students, mainly because they nearly always altered the schedule and routine to which students were accustomed. Substitutes gave the wrong assignments, forgot to show films or television programs, and tended to give too much work. They often had to ask students what was to be done next and students regarded such behavior as inappropriate and even worse than if the substitute just did things differently than the regular teacher. Substitutes were a source of uncertainty and confusion rather than novelty or interest. Third graders liked the predictability of their day, for in that sense they had a measure of control over what was happening. The intrusion of a substitute into this routine created undesirable anxiety among students. They missed the regular teacher who could be trusted to do what they all knew she was supposed to do and to do it at the right time and in the right order.

Because they did not have to be in control of their time in school, third graders rarely wore watches to school. Most watch-wearing and noticing of clock times took place among the intermediate third graders. Most students claimed to own a watch that they had received for a birthday or Christmas within the last three years, so it was not a lack that kept them from wearing watches. Recently received watches were likely to worn for a brief period and then abandoned at home. One intermediate boy who received his watch for his birthday in November wore it daily for the rest of the year, but he was the only child to do so. His friend was inspired to wear his watch more often as a result, but still not more often than once a week. If a student had an appointment after school or had been told to be home at a certain time, then he/she might wear a watch that day as a reminder. A few intermediate girls wore them more for their value as jewelry than as time pieces.

One reason intermediate third graders were likely to be more aware of clock time was that they had access to a clock in at least two of the areas designated for third graders in their unit. In the primary unit, the clock was outside the students' classroom area and difficult to see from most of the desks.

It was in the intermediate mathematics classes that most clock watching took place. The person nearest the clock was likely to be the one asked by other students what time it was. Once that information was calculated, it was spread to students in the immediate vicinity. Clocks were also a source of entertainment, for students were still amused by actually seeing a clock hand move to the next minute and seeing if the bell and clock were synchronized.

No one ever pointed out to the teacher what time it was nor checked her accuracy about the number of minutes left in class. Watches and clocks were still just parts of their environment, and not a source of data to be used in controlling this environment or their own or someone else's actions.

Friends and School Time

Although the students were friendly to all other third graders in their units and cliques did not exist, definite friendship groups had developed. However, some children, especially in the primary unit, did not belong to a group or have a best friend. Third graders believed that there was enough time to talk to their friends each day although this generally had to be done during outside recesses

Only two intermediate girls and a primary boy felt the amount of time with friends each day was inadequate. These three students were exceptionally dependent on having interaction with their friends to make the day "good." The primary boy and one of the intermediate girls had developed complex relationships with a friend of the same sex and reacted abnormally to any perceived lack of attention or slight from this friend. The child cited as the friend by each of these students did not react similarly and they tended to complain to the teacher about the demands placed on them by these two students.

The existence of friendships obviously played an essential part in making the school year good or bad. One primary third grade boy who was a year older than the others felt the main reason he liked school this year better than last was that he had friends this year. Another primary boy who also was a year older was having a much easier time adjusting to the demands of school because this year he had a best friend.

Friendships definitely were related to the sex and ability level of the students involved. Close friendships seldom crossed unit lines, and when they did it involved a student who, according to achievement test scores, would have been better placed in either the unit higher or lower than their own.

In the intermediate unit the highest ability boys as determined by achievement test scores tended to form mutual friendships among themselves and regarded one boy as a particularly close friend. They knew they were high achievers because they all were in a higher ability mathematics class than were most intermediate third graders. These students worked industriously in school and were the most likely to have free time when they could work together. The highest ability boy was regarded as an inspiration by his best friend. Although not an unfriendly child, the boy with the highest IQ score, however, was fairly isolated from other students in terms of friendship. His friend who was left-handed and especially liked drawing in his free time was also somewhat isolated from others but less so than his friend. These were the two intermediate boys who wore watches most often.

The most popular intermediate boy, regarded as a friend by more boys than any other, was a child whose achievement scores and IQ were only slightly higher than the mean for all third graders and whose amount of off-task time was only slightly higher than the mean for intermediate boys. The girl generally regarded by the other girls as their friend had achievement scores and IQ slightly lower than the mean for third graders, and her off-task time was almost exactly the mean amount for that group of girls.

Friendship groups among intermediate third-grade girls were more clearcut than those among the boys. There were essentially two groups among the intermediate girls, and they fell roughly along ability lines as indicated by achievement test scores and IQ. Only one intermediate girl who did not clearly belong to either group regarded one of the highest ability boys as a friend, and this friendship was reciprocated.

Primary third graders were less likely to have a particular friend or a group of friends than were intermediate third graders. When they were allowed to move their desks together with their friends, most did not know what to do. The primary third graders were simply less adept at social interaction, and it is not surprising that it was harder for friendships to blossom there. The three girls who had either Title I reading or mathematics or both together formed a definite friendship group. There were also two friendship pairs among the boys. One pair had Title I reading together. Interestingly, the boys in the other pair had exactly the same achievement test scores. There were no other real friendship demarcations in this class. These children rarely claimed to have friends in the intermediate unit. If they reported having friends in other grades, they were mostly in lower grades and were very likely to be neighbors. The highest ability primary third-grade girl, whose achievement score was higher than more than a third of those of intermediate third graders, had difficulty establishing any friendships in the primary unit and seemed more interested in adults than other children.

The most popular primary boy was one whose achievement score was below the third-grade mean but whose IQ corresponded almost exactly to the mean IQ for that group of boys. His amount of off-task time was barely higher than the mean for the group as well. The most popular primary girl was one whose achievement test score and IQ were below the mean for that group of girls. She also had the lowest amount of off-task time among the primary girls.

Third graders in both units tended to believe that they worked at the same speed as their friends. However, the highest ability intermediate boys (excluding the boy with the highest achievement test score) believed they worked slower than their friends. Lower ability intermediate girls also thought that they worked more slowly than did their friends.

Two intermediate boys and one primary boy who obviously worked quite slowly believed they worked faster than their friends, but these same three boys tended to perceive reality differently than other children and were on the periphery of social groups rather than central figures. They expressed more confidence about themselves than their achievement or social status warranted. It was impossible to determine if this confidence was real or merely a show of bravado which masked a lack of confidence. The other primary boy who believed he worked faster than his friends actually was observed to finish assignments more swiftly than his best friend and had a significantly higher achievement score than the friend.

Whether a student worked at the same speed as his/her friends could have an effect on the availability of free time which, in turn, permitted activities that might involve partners. Given a choice, students chose friends as partners, but if a friend was not available it did not matter who they worked with as long as the person was of the same sex. As the year drew to a close, however, sex lines were crossed more often by third graders in their search for partners in spelling and free time activities, especially in the primary third-grade class.

Differences in chronological age had no effect on the formation of friendships among third graders. Students were unaware of age differences among themselves although there was a range of 13 months among students in the primary third grade and 11.5 months among intermediate third graders. Friendships between students who were old enough to be fourth graders and those of third-grade age formed as readily as those between third graders of the same age. The two second graders who appeared in both the primary third-grade reading and mathematics classes were believed by the third graders to be third graders and had friends among the third graders in these classes.

PART II: STUDENT PROFILES FOCUSING ON THE RELATION BETWEEN THE INDIVIDUAL USE AND PERCEPTION OF SCHOOL TIME

Just as there was no typical school day at Kennedy School, there was no typical third grader. Although general statements have been made about students in the third grade at Kennedy School and about various groups within that grade, these statements do not dwell on the variations from the mean, why they might exist, and what effect they may have on the particular child's use and perception of school time. How and why the variations occur among students are of special importance in an ethnographic study of an IGE elementary school where it is expected that individual differences would receive more consideration than in a traditional school.

This part of the analysis of the data presents brief profiles of 40 of the 43 third graders at Kennedy School. For organizational purposes, the students have been categorized into one of four groups determined by unit and sex and then ranked within that group according to decreasing percentages of off-task time. After a brief description of the student's use of school time as determined by percentage of off-task time, use of recess, and number of absences, relevant personal characteristics that may have an effect on the student's use of time are mentioned. These might include ability level, age, learning problems, and newness to the school. The individual's personal relationships with students and teachers are examined in terms of how they affect the child's use and/or perception of school time. Finally, the individual's perception of school time is surveyed for clues about factors that might affect the student's use of school time.

Intermediate Third-Grade Boys

Charles

This boy had the greatest percentage of off-task time among intermediate third-grade boys. He spent 8.5 percent of his entire day off-task. The percentage rose to 9.7 percent if only the academic subjects were considered. His 17.18 percent of off-task time in spelling was quite high among third graders, while his 11.9 percent of off-task time in language was the highest among this group of boys. His off-task time was also somewhat higher in reading with 7.94 percent and social studies/science with 7.5 percent than in mathematics with 5.34 percent. Despite the high amount of time off-task, he did not have to stay in from recess to finish work. Unfortunately, there was no end of the year attendance record available for him since Charles moved to California in mid-March.

Charles' ability level was slightly below average among intermediate boys. His IQ was 119. His total achievement test score was 63; his scores of 38 in mathematics and 34 in spelling were higher than his scores for reading (22), social studies (10), and science (15). He was placed in the low reading group in the low-ability reading class. For mathematics he was in the class which contained most of the intermediate third graders. Charles was one of the younger third graders since he was 96 months of age at the beginning of the school year. Charles was also one of the two black students in the third grade.

Charles did not have close friends in the class. His off-task behavior was disruptive. He persisted in talking to all the children seated near him. The other children did not always respond to his attempts at distraction. Although at times they were diverted by his efforts to entertain, they did not participate in them. His teachers were actually relieved when he moved to California because he had exerted such an unsettling effect on the class.

Charles had a realistic grasp of school time as demonstrated by his accurate description of the daily schedule, number of hours in the school day, and the number of months in the school year. He found reading to seem longer than he knew it actually was. His favorite part of the day was mathematics, which he thought was too short. Physical education was also too short. He also liked art and social studies when there were projects to do. He preferred morning to afternoon because it had shorter periods of time. He thought that he worked faster than his friends and always had enough time to finish his assignments in school. He was never bored in school. He was able to provide a detailed order of the following day's events but could not describe those of the previous day.

Robert

Robert's percentage of daily off-task time was 7.8 percent and rose to 8.77 percent if only academic subject time was considered. His off-task time for spelling of 22.58 percent was a record high among third graders. The percentage of reading spent off-task was 9.09 percent while the percentages of off-task time in mathematics and social studies/science were lower at 6.83 percent and 5.69 percent, respectively. His off-task time in language amounted to 3.5 percent of the time. Robert had a difficult time completing his work correctly the first time; however, he only spent 4.0 percent of his morning and afternoon recess time working. He tended to do his work in a rather superficial, cursory fashion and then have it handed back for corrections. Robert did not miss a day of school during this year and missed only half a day in the previous year.

Although Robert's ability level was below average for intermediate boys, he had been placed in the intermediate unit rather than in the primary unit in order to separate him from Dennis with whom he had created a discipline problem in the second grade. Robert's IQ score was 109, while his total achievement test score was 50.5. His spelling achievement score was his highest at 46.5. His reading score of 38.4 was higher than those for mathematics at 28.4, social studies at 25.4, or science at 15.3. Robert was in the low-ability reading class in the intermediate third grade. He was placed in the same mathematics class as most third graders. He was 99 months of age when school began.

Robert's off-task behavior consisted largely of daydreaming and laughing inexplicably at happenings in the class. This latter behavior was enough to set off a chain reaction of giggles among students seated near him at the back of the class. Robert had no close friends in his unit, but he still considered Dennis, who was in the primary third grade, to be his friend. Robert believed that he liked to talk to his teachers despite the fact that they repeatedly remarked to him in front of the class about his being off-task.

Robert's grasp of time was somewhat fuzzy. Although he could report the order of his daily schedule, he could name only eight months of the year and those were out of order. He believed that the school day consisted of ten hours although he could correctly give the times for the beginning and end of the school day. He was hazy about the year of his birth and finally settled on 1980 without seeing any problem with such a reply. Robert liked school although he did admit to being bored at times when he could not think of anything to do. He preferred the morning with its greater number of subjects to the afternoon. He believed language was too short. He looked forward to recesses and lunch each day and to physical education on the days it occurred. Music was his least favorite subject. He thought he worked at about the same speed as his friends. Robert could recall enough about the previous day to remember that reading had been easier, and he surmised that the next day would be much the same as the current one.

Peter

Peter's percentage of daily off-task time at 7.78 percent was very close to Robert's. However, his off-task time decreased to 7.59 percent when only academic subjects were considered. The percentages of off-task time in reading, with 11.11 percent; spelling, with 11.42 percent; and language, with 10 percent, were fairly consistent. His percentage of off-task time in reading was the greatest among intermediate third-grade boys. His off-task time in mathematics was lower at 5.64 percent. He displayed no off-task behavior in social studies/science. Peter spent 14.66 percent of his recess time inside working on assignments he had not completed. On a couple of occasions he had to miss the class following the one for which he had not finished his assignment so as to complete it. One time he and another student were not permitted to go to an entertainment movie because of their inability to finish assignments on time. His absence rate was very low, for he missed only two days this year and one day the previous year. This was his second year at Kennedy School; his first-grade year had been spent in Illinois.

Peter's IQ score at 150 was the highest in the third grade; however, his achievement test score of 73.6 was almost exactly at the mean for intermediate third-grade boys. His scores for social studies at 96.9 and science at 88.7 were among the highest while his mathematics at 69.6 and reading at 75.6 were about average. His spelling score of 39.4 was below average. He was in the high-ability group within the low-ability reading class in the intermediate third grade and in the mathematics class which contained most of those third graders. At 93 months of age in September, Peter was the youngest child in the third grade in either unit.

Peter did not have any close friends although he was always included in the activities of one group of boys. He regarded Eric as an especially good friend but Eric did not consider Peter an especially close friend although he did inspire Eric to wear his own watch more often than he would have otherwise. Peter's off-task behavior was at times limited to gazing about and at other times to responding to more talkative children nearby. His behavior was not disruptive to the class. Toward the latter part of the year, Peter began having half-hour counseling sessions each week in place of a language class. Peter was failing to complete assignments for no apparent reason, but with the combined efforts of the counselor and Frank, another third-grade student, he began finishing them again.

Despite the fact that he had received a watch for his birthday in late November and was the only child to wear a watch to school every day, Peter had a very hazy grasp of time. He did not know the number of months in the school year or when it began or ended. He was unable to list all 12 months of the year in order, for he left out one. He did not know the date of the current day. However, he did know when the school day began and ended and that it lasted approximately six and one-half hours. Only five students used fractions of an hour in describing the length of their school day. Although Peter could describe parts of his day in great detail, he could not provide the order of classes in his daily schedule. Peter was willing to describe tomorrow but not yesterday. Despite his low achievement score in spelling, that was his favorite subject. Mathematics was his least favorite subject, and quite often he fell behind in his work in math. Afternoons, which did not contain mathematics, were preferable to mornings. He had little free time in school in contrast to most other intermediate third graders, yet he thought he worked faster than his friends. It may have been this perception that slowed him down in doing his assignments so that to the observer he appeared to work more slowly than others. It may be that he was deliberately slowing down so as not to work faster than others.

Allen

Allen's percentage of off-task time of 7.74 percent was almost the same as that of the previous two intermediate third-grade boys. When only academic subjects were considered, that percentage dropped to 7.19 percent. The percentages of off-task time in spelling with 10.6 percent and mathematics with 9.67 percent were over twice that of his 4.16 percent off-task time in reading. The time off-task in social studies/science at 7.47 percent and language at 7.69 percent fell between those two extremes. At 17.33 percent, Allen's amount of recess time spent working was the highest for all intermediate third-grade boys. Allen missed nine days of school during both this year and the previous year. He tended to daydream to such an extent that other students were aware of it, and this tendency was reflected in his slow completion of tasks. Allen's first-grade year had been spent in a traditionally-oriented school within the same school district.

Allen's ability level was slightly below the average for the group. He shared his achievement test score of 69.6 with two other boys, Stuart and Fred. His mathematics achievement score was exactly the same as his total score, but his science score was highest at 79.7. His reading score of 62.6 was slightly lower than his mathematics score, and his spelling and social studies scores were much lower--at 46.5 and 36.4, respectively. He was in the high-ability reading class but in the low-ability group in that class. He was in the same mathematics class as most intermediate third graders. Allen was 97 months of age in September.

Allen had no close friends among other third graders but tended to be included in the activities of the intermediate boys. Although the teachers frequently had to remind Allen to get to work, in language class he had to be reprimanded for going ahead with worksheets before the teacher had finished giving directions.

Although Allen knew the months of the year correctly and could identify the months in which school began and ended, he did not know the number of months that he was in school each year. He was one day ahead in giving the date of the current day, a rare error among these students. He knew when the school day began and ended but slightly overestimated the number of hours and minutes in the day. Despite the fact that he could describe parts of the day in much detail, he could not recall the order of events in his daily schedule nor could he predict the following day's events. He did note that the current day was easier than the previous one. There was nothing Allen particularly liked or disliked about school although he confessed to being bored in mathematics. The afternoon went faster because it was shorter than the morning, and the best time of day was when school was about over. Allen believed he sometimes worked more slowly than his friends. Given his tendency to distraction, it was not surprising that he thought the school would benefit from putting walls between classrooms.

Matthew

Matthew's percentage of total off-task time daily amounted to 6.99 percent and increased to 7.8 percent where only academic subjects were considered. At 14.77 percent, his off-task time for language was the highest among intermediate third graders. In spelling, where he completed daily assignments rapidly, 13.43 percent of his time was off-task. In mathematics, 9.24 percent of his time was spent off-task. The subjects in which he exhibited the least off-task behavior were reading with 4.59 percent and social studies/science with 1.94 percent. Matthew was required to stay in during recess 6.66 percent of that time. Part of this extra work time was required as a result of his absences. During the current year he was absent 10.5 days, most of which was accounted for by an extended spring vacation trip with his mother. The previous year he had missed 7.5 days of school.

This black student's ability level was among the very highest for third graders. His achievement test score of 93.8 was the second highest for intermediate boys, and his IQ of 137 was the third highest in that group. His highest achievement test scores were in spelling with 97.9, reading with 89.8, social studies with 96.9, and science with 94.8. His mathematics score was the lowest of his scores. He was placed in the high-ability group in the high-ability reading class for intermediate third graders. He was also one of the five intermediate third graders to be placed in a higher-ability level mathematics class with fourth and fifth graders. At the beginning of the school year, Matthew was 104 months of age which was somewhat older than the mean for third graders because his birthday fell at the beginning of January.

Matthew was well liked by all the other third graders. His close friends included two of the highest ability third-grade boys who were also in the higher ability mathematics class. A third close friend was an intermediate girls who generally sat near him in several classes. This was one of the rare cross-sex friendships in the third grade. Furthermore, Matthew was the only child who found the more off-task Allen to be intriguing and regarded him as a friend although Allen did not express a reciprocal friendship. Matthew got along with his teachers as well as he did with students.

Matthew's perception of time included some incongruities. Although he knew the months of the year, he did not know the number of months in the school year or in what month the school year ended. He underestimated the number of hours in the school day as five hours; yet he correctly knew the times for the beginning and end of the school day as well as the exact times for each class. He was well aware of his daily schedule. Science was his favorite part of the day and did not last long enough, since he hoped to be an astronaut eventually. He could predict the events of the following day and note differences between the current day and the previous one. Matthew was never bored in school despite having quite a bit of free time after he had finished assignments and wishing he had more time to go to the IMC. He had no idea whether he worked at the same speed as his friends.

Tom

Tom's percentage of total off-task time daily, 5.89 percent, was only slightly higher than the mean of 5.21 percent for intermediate third-grade boys. If only academic subjects were considered, his off-task time rose to 6.7 percent of his class time. Spelling at 9.83 percent claimed his highest percentage of off-task time, but reading at 8.53 percent was close behind. He had less off-task behavior in language at 5.88 percent and in social studies/science with 5.45 percent. His mathematics percentage of off-task time was his lowest at 4.2 percent. Tom's use of recess time to complete work was minimal at 4 percent. His absence rate was also low for the current year at 3.5 days. However, the previous year he had missed 7.0 days of school.

Tom's ability level as measured by his achievement test score of 57.5 was below the average of intermediate boys but at almost exactly the mean for this group according to his IQ score of 120. His science score, 88.7, was his highest and reading at 34.4 was the lowest. Spelling, at 58.5, mathematics, at 52.5, and social studies, at 47.5, fell between these extremes. He was in the high-ability group of the low-ability reading class and in the same mathematics class as most intermediate third graders were. Although small in stature, Tom was one of the older third graders at 107 months of age at the beginning of the school year. Since Tom had moved to Jackson from California at the beginning of the second grade, his records did not reveal whether he had failed a grade or whether he had started to school a year late because of his October birthday.

Tom was extremely popular with the other third graders of both sexes. Tom also had several close friends. At 5.71 percent, his friend Paul had almost the same amount of off-task time as Tom although Paul had a much higher achievement test score and a lower IQ score than Tom. His other two friends, Eric and Fred, had slightly less off-task behavior at 4.77 percent and 4.66, respectively. All four boys had off-task percentages that were extremely close to the mean for intermediate boys. The achievement scores of the latter two boys were higher than Tom's, and their IQ scores also were higher. Tom was a special favorite of his teachers for his affable nature.

Although Tom knew the months of the year, he was baffled about the number of months in the school year and even when it began and ended. He did not have a reliable sense of where he was in the school year in relation to the beginning and end points. In giving the date of the current day he was one day behind. He knew at what times the school day began and ended but had no idea how many hours were in the school day. He could describe the order of events in his daily schedule but not how long any classes (including the noon recess) lasted. He could remember differences between the current day and the previous one and could predict possible events for the following day. He mainly looked forward to having fun in school each day. His favorite part of the day was physical education or art. Even though he did not like reading, which occurred in the afternoon, he preferred afternoons to mornings. Mathematics at times was boring while language could have been longer. He believed he worked at the same speed as his friends.

Paul

This intermediate boy's 5.71 percent of off-task time was close to the mean for this group. The percentage was reduced to 5.39 percent where only academic subjects were considered. The subject in which he exhibited the largest amount of off-task time (10 percent) was spelling. The subject with the least off-task time was social studies/science at 1.9 percent. In reading he was off-task 6.35 percent of the time; in mathematics, 5.6 percent of the time; and in language, 4.0 percent of the time. Paul did not need to complete assignments during recess time. His annual number of days absent was consistent with 6.0 this year and 6.5 for the previous year.

Paul's achievement test score of 89.8 was the fourth highest among intermediate third grade boys while his IQ of 110 was among the lowest. Only Robert's IQ score was lower and, interestingly, these two boys were the only ones who lived on farms. Paul's reading achievement score of 96.9 tied for top place with that of another boy with the highest total achievement score. His spelling score of 92.8 was almost as high as his reading score. His mathematics score, 57.5, was his lowest score with his social studies and science scores of 68.6 and 88.7, respectively, falling between these extremes. Paul belonged to the high-ability group in the high reading class and to the mathematics class containing most of the other third graders. Paul's late December birthday made him one of the older third graders at 104 months of age when the school year began.

Paul was a very serious third grader who had views on everything. He had several close friends, including Tom, Eric, and Fred, whose amount of off-task behavior was fairly similar to his. These boys were never disruptive in class and tended to work diligently until they had finished the current assignment. With work done, there was opportunity for off-task behavior as they generally did not seek other activities to fill the remaining time. Paul and his teachers got along well, but Paul was the one child who would inquire of the teacher how long he had to complete an assignment and on occasion would remind the teacher of something he thought she appeared to be forgetting.

Paul's perception of amounts of time was very accurate. He knew the number of months in the year and in the school year. He was one of two students who knew the exact date school ended, and he knew school began in August. He knew the number of hours in the school day and the times when school began and ended, but he could not remember the current day of the month. He could describe his daily schedule in detail and was one of the five high-ability boys who knew exactly what times subjects began and ended. Paul could discuss differences between the current day and the day prior to it as well as the one following it. He especially enjoyed physical education but also enjoyed language. He also liked spelling but could become bored there after the day's assignment was done. Despite his ability in reading, he did not like reading class and wanted to shorten it by a half hour each day. Because he disliked reading, which occurred in the afternoon, he preferred the mornings with shorter periods. He believed that he worked more slowly than his friends.

Alex

Alex's percentage of off-task behavior, 4.93 percent, was closest of all to the group mean of 5.21 percent. His percentage of off-task behavior increased slightly to 5.3 percent if only academic subjects were considered. Alex had only a negligible amount of off-task behavior in social studies and science, but in mathematics his off-task time was 8.4 percent. His 7.44 percent off-task time in reading was close to the mathematics percentage while spelling at 4.47 percent was quite close to his overall percentage of off-task behavior. His off-task time in language accounted for 2.27 percent of his time in that class. Alex rarely had to stay in during recess to complete assignments, and the 2.66 percent of recess time that he spent inside working reflects this. Alex's absence rate of 18 days for the current year was the highest for all the intermediate third graders. The previous year he had only missed 3.5 days. Nevertheless, he remained up-to-date in his work, while many of the students who were absent far less than Alex did not keep up-to-date.

Alex's ability level was quite high according to his achievement test score of 92.8, which was the third highest score for this group of boys. However, his IQ score at 123 was close to the mean of 124.8 for this group. Alex's reading, mathematics, and social studies scores were exactly the same at 89.8, and his science score was only slightly lower at 88.7. His spelling score was considerably lower at 39.4. Alex was placed in a higher ability mathematics class with fourth and fifth graders, while in reading he was in the low-ability class although a member of the high-ability group within that class. Alex was 100 months of age at the beginning of the school year, about average for the group.

Alex was a friendly child with a well developed sense of humor. He especially liked to talk to adults. He was identified as a "best friend" by Matthew, who was also in the high-ability mathematics class.

Alex's grasp of time was slightly askew. He knew all the months of the year but not in order, and he thought school had started in October. However, he had an accurate sense of where he was in the school year in relation to the beginning and end of the year. He knew the beginning and ending times of the school day, but when he calculated the number of hours and minutes in the day he missed by an hour. He could correctly describe his daily schedule including the beginning and ending times of his classes. Although he was not thrilled about coming to school early in the morning, which may partly explain why he failed to do so on 18 days, once he arrived he enjoyed himself. He liked reading and the afternoon, but he especially looked forward to spelling and the specials each day. He liked language well enough to suggest lenghtening it. Boredom set in when he had finished his work in mathematics and also when he could not find children who wanted to play the same games at recess. Like Paul, who was close to Alex's achievement level, he thought he worked more slowly than his friends.

Fred

Fred's off-task behavior accounted for only 4.77 percent of his day. If such behavior is considered for only academic subjects, the amount of Fred's off-task time rose slightly to 5.76 percent. This behavior was most in evidence in reading where 8.69 percent of his class time was spent off-task. Language and mathematics provoked slightly less at 7.4 percent and 6.5 percent, respectively. Off-task spelling time was 4.25 percent of that class. Off-task behavior was almost nonexistent for him in social studies/science with .82 percent. Fred, like the other four boys in the higher ability mathematics class, never had to stay in at recess to complete mathematics assignments. He did not stay in often to finish work for other classes either. His ability to remain up-to-date in his work is interesting in light of the fact that he was absent 16 days during the school year. That was consistent with the previous year's 18 days of absence.

Fred had the same total achievement score, 69.6, as Allen and Stuart, but each of them had IQ scores higher than Fred's 128. His achievement scores ranged from 85.7 in spelling to 47.5 in social studies. Mathematics, at 78.7, reading, at 57.5, and science, at 50.5, fell between these extremes. Fred was part of the high-ability mathematics class, but he was in the low-ability reading class's high-ability reading group. He was not, however, placed in the high-ability mathematics class as early in the year as the other four boys. Fred's age was 102 months in September.

This child's off-task behavior was limited to looking around to see what others were up to and occasionally talking to his neighbor. He was noticeably shy and lacked the outward confidence possessed by most of the intermediate third graders. His two closest friends were Paul and Tom. The teachers were somewhat concerned about Fred's timidity but assumed he would grow out of it, as indeed he appeared to be doing during the course of the year.

Fred lacked confidence in his own grasp of time concepts, especially if someone near him gave a different answer. His first responses about his perceptions of time were quite accurate but on later occasions he gave different and incorrect responses that were similar to those of the child he had been sitting next to when he wrote them. Despite his knowledge of the months of the year and the beginning and ending times of the school day, he did not have a complete grasp of the school year or day. He thought the school year lasted ten months but had its beginning in June. He could not figure out in what month it ended. Surprisingly, he knew exactly how many months he had been in school so far that year and did not guess but actually calculated the answer. However, he saw no conflict in giving the same answer for how long it had been since Christmas. Although he knew the correct beginning and ending times of the school day, he overestimated the length of the day by an hour. He could provide the order of the subjects in his daily schedule and knew how long reading lasted in minutes but could not give the clock times for when these subjects occurred. Most days in school were the same for Fred. His favorite part of the day was afternoon, especially afternoon recess. Reading he regarded as too long, and he thought he had too much to do in that subject. Spelling, however, was too short. He believed that he worked at the same speed as his friends. Fred refused to predict events of the following day and drew a blank about those of the previous day.

Eric

Off-task behavior accounted for 4.66 percent of Eric's daily time in class. For academic subjects, that behavior was exhibited for 4.77 percent of class time. Spelling provided the opportunity for Eric's greatest percentage of off-task behavior with 11.94

percent of his time there being off-task. In language his off-task time took up 9.85 percent of that subject's allotted time. In reading he was off-task 5.98 percent of the time but only 2.22 percent of the time in social studies/science. His 1.58 percent of off-task time in mathematics was one of the three lowest percentages among intermediate boys for that subject. Eric spent 8 percent of his recess time working on assignments. He seemed to have most difficulty completing long-range assignments such as social studies/science packets. His absence from school on 3.0 days this year was comparable to the previous year's 3.5 days. It was not absence that kept him from completing longer assignments on time. Eric's off-task behavior appeared to stem from lack of motivation rather than from overstimulation. He had started at Kennedy School in the second grade, having attended a more traditional school in a nearby school district the previous year.

Eric's ability level was relatively high, for his achievement test score of 83.7 was the fifth highest among intermediate boys. However, his IQ score of 122 was slightly below the mean of 124.8. His highest achievement score was in mathematics and was the same as his total achievement score. His reading score at 80.7 was only slightly lower. Spelling was lower at 58.5. as were science at 50.5 and social studies at 36.4. Eric belonged to the high-ability reading group in the low-ability reading class and was in the same mathematics class as most third graders. He was 103 months of age in September. Two salient characteristics that set him somewhat apart from the other boys were that he was left-handed and that he enjoyed drawing more than most children. His free time was often spent drawing pictures.

Eric got on well with other children in an effortless manner. He did not seem to care whether they were around or not and yet other boys always seemed to be around him although they were more aware of the teachers' authority than was Eric. Eric did not have much to do with the teachers and, if anything, mildly irritated some of them (including his music teacher) by not always doing as he was told. His best friends were Paul and Tom. Eric was also friends with Peter and was inspired by Peter's habitual watch wearing to occasionally wear his own watch.

Eric's perception of time was much like Fred's although he was much more confident than Fred. He knew the months of the year but thought school began in June or July and could not then figure out when it ended. He underestimated the length of the school year as being seven or eight months but overestimated the length of the school day by two hours despite his ability to identify correctly the beginning and ending times for the school day. He was able to describe his daily schedule in detail and could give correctly most of the times when classes began. Spelling, lunch, and recesses were his favorite parts of the day. He liked science least and found it and mathematics to be boring at times. He wanted to shorten science and lengthen language. Mornings went faster than afternoons. He could point out differences between the present day and the previous and following days. Although he thought he had lots of free time, he still thought he worked more slowly than his friends.

Gary

The percentage of this boy's total class time spent off-task was 3.81 percent. When only off-task time in academic subjects is considered, the proportion of off-task behavior increased to 4.03 percent. A higher percentage, 5.97, occurred in spelling than in other subjects. Mathematics was close to this level with 5.64 percent. In language, Gary was off-task 4.76 percent of the time and in reading, 4.23 percent. He gave no evidence of off-task behavior in social studies/science. Gary had to use 8 percent of his recess time for completing assignments. He was absent only 3.0 days this year and 5.5 days the previous year.

Gary's ability level as measured by both his achievement test score and his IQ score were below the mean for this group. His total achievement test score was 64.6, the same as that of the highest ability boy in the primary unit, and his IQ score was 115, lower than that of the highest score by a boy in the primary unit. Gary's highest achievement test score, 65.6, occurred in science and his lowest, at 36.4, was in social studies. His score for reading was 62.6 and for both mathematics and spelling, 52.5. Gary was in the low-ability group in the low-ability reading class and in the same mathematics class as most intermediate third graders. At 106 months of age in September, Gary was relatively old for a third grader. His birthday was in November of the year prior to the year that most of the third graders were born.

Gary was included in activities with other boys, but he had no close friends. The boys who sat near him in class thought of him as a friend, but the boys he wanted to be friends with included the boy with the highest achievement score and that boy's best friend. Gary had no trouble doing exactly what the teachers told him to do. He worked diligently and tried to get others to behave as well.

Gary's perceptions of school time presented some divergence from reality. He was aware of the 12 months of the year and their order of occurrence, but making use of that knowledge was another matter. He believed school lasted ten months, that it had started in June, and that it would end in August. He was two days behind on his determination of the current date. Although he could give the starting and ending times of the school day, he overestimated the length of the day by an hour. He could provide the order of the day's schedule but underestimated the length of the reading period by a half hour and thought noon recess lasted two and one-half hours. He liked language and recess most and reading and mathematics least. Despite his dislike of mathematics, he would have lengthened both mathematics and language periods so that he could get all his work done in those subjects. Mornings seemed to go faster for him because of the shorter periods. Amazingly, Gary believed he worked faster than his friends although he was always one of the last ones to finish. Although Gary was a child who was busy observing his environment, he often did not arrive at accurate or even logical conclusions from these observations. This foggy perspective was not especially unusual for these third graders, but his rigidity and his confidence in believing that his conclusions were quite logical and accurate were unusual.

John

John's percentage of total daily off-task time was 3.61 but increased to 4.34 percent when only academic subjects were considered. His proportion of off-task time was highest for mathematics at 6.42 percent. The amount of his off-task behavior in social studies/science was 4.95 percent and in spelling it was 4.91 percent. The smallest amounts of off-task behavior occurred in reading with 3.22 percent and language with 1.66 percent. John did not need to use recess time for finishing his assignments despite the fact that he was absent 11.5 days during the year. That amount was consistent with the 13 days he had been absent the previous year.

John was of particular interest because his total achievement score of 99.9 was the highest of all third graders and his IQ score of 138 was the second highest. His mathematics score was 99.9, his spelling score was 97.9, and his reading score was 96.9. His science and social studies scores were lower at 94.8 and 89.8, respectively. John was placed in the high-ability group in the high-ability reading class, and he was one of five third-grade boys in the higher ability mathematics class. At the end of the year he was the only third grader placed with fifth graders in a still higher ability mathematics class for one unit. John was always ready to ask questions and to offer very perceptive and factual comments about whatever was being studied. Whatever he had to say was stated extremely well. John was 105.5 months of age at the beginning of September and thus was slightly older than many third graders because his birthday fell in November in the year prior to the one in which most of the third graders were born.

Despite John's obviously higher ability level, he fitted in well with the other third graders. He was admired by Allen and Gary, but the two boys he liked best were Frank and Philip. These two boys ranked immediately below John in amount of off-task behavior. Philip was John's best friend, but John was the leader in that friendship pair. Philip was in the same high-ability classes as John, and at 108 months of age was also old enough to be a fourth grader. John got on extremely well with his teachers, who called on him frequently. He did not care for substitute teachers, though, because they were too helpful.

Oddly, John's grasp of time concepts was somewhat foggier than would be expected from a student of his high ability level. He knew the months of the year, but he thought there were only five or six months in the school year despite being able to pinpoint the beginning and ending months as September and May. He underestimated the amount of time he had been in school so far this year. When he provided the current date, he was one day behind the actual date. Although he was aware of the opening and closing times for the school day, he believed there were only six hours in the day. He was willing to predict what future days and weeks in school would be like although he was hazy about events of previous days. When he described his daily schedule, he left out the "specials." His favorite periods of the day were mathematics, language, and working on projects in social studies or science. He also looked forward to art on Fridays. He liked reading least because he finished early every day, and there really was nothing to do then. Mornings seemed faster than afternoons because of fast classes. His favorite part of the year was not Christmas or parties, as for most third graders, but the days report cards were given out. He believed he worked at the same speed as his friends, and he wore his watch to school at least once a week.

Frank

Frank's percentage of total off-task time was 2.42 percent and 2.9 percent if only academic subjects were included. The highest percentage of his off-task behavior, 10.44 percent, occurred in spelling. His off-task time in language was 4.41 percent and in reading, 2.51 percent. His off-task time in mathematics was minimal at .93 percent and was even less in social studies/science at .86 percent. Frank was not observed to stay in during recess to finish any work, but apparently there were occasions when he did. His absence rate was low at 2.5 days this year, and he was absent only 1.0 day during the previous year.

Frank's ability level at 50.5, according to total achievement test score, tied with Robert's as the lowest for this group of boys. It was also the same as George's, who with the same score had the second highest score among primary third grade boys. Frank's IQ score was 112, which was very close to the IQ scores of these two boys. Frank's highest achievement test score, 65.6, was in science. His other scores were very similar, with 47.5 for social studies, 46.5 for spelling, and 45.5 in both reading and mathematics. Frank was 99 months of age at the start of the third grade.

Frank was a very serious child and one of the most articulate third graders. However, he panicked easily and burst into tears when he thought he would be unable to complete satisfactorily an assignment in the allotted time. For most of the year he worked with the counselor for a half-hour session each week in place of a language class in order to control this behavior. The teacher he had for most of his academic subjects was working in conjunction with the counselor to eliminate Frank's panic by insisting that she would not help him if he was crying. She would help him only as long as he remained in control of himself. The fact that he was the only child of older parents may provide some insight into both the origin of his articulateness and his desire for perfection.

Frank was not an especially sociable child, although he had friends among the other boys and was good friends with John, Philip, and Ted, all of whom ranked at the bottom for percentage of daily off-task time. John and Philip were in higher reading and mathematics classes than Frank, while Ted was in the same ones as Frank and even in the same low-ability reading group.

Frank was one of the few intermediate third graders who could not list all the months of the year in order; in fact, he only managed to remember eight and those were out of order. He tried to include three of the seasons in order to bring the total up to 11. He believed that the school year lasted eight months and that it began in December and ended in June. He seemed to understand the structure of the year but attached wrong names to parts of it. When giving the date of the current day, Frank was five days behind. This was one of the most serious errors made by third-grade boys who attempted to give the current date. He overestimated the amount of time since Christmas, however, by 2.5 months. He could accurately note the beginning and ending times for the school day and he and Peter were the only children to calculate correctly the number of hours in the school day. His accurate grasp of the school day extended to the order of subjects in his daily schedule, but he could not provide the times at which those subjects occurred. He overestimated the length of noon recess by an hour. He looked forward to going to school each day and especially liked spelling although he claimed that the classes which were the most fun occurred in the afternoons. He could become bored with too much free time in mathematics because he did not care much for flashcard practice. Interestingly, he believed that he worked at the same speed as his friends and that their speed was fast.

Philip

His daily off-task time amounted to only 2.26 percent of his total class time. If only academic subjects are considered, the proportion was 2.72 percent. The subject in which Philip exhibited his highest percentage of off-task behavior, 11.36 percent, was language, where he finished his assignments quickly. He was off-task 6.38 percent of his time in spelling and 2.09 percent in reading. He was rarely off-task in mathematics with his .85 percent being the lowest percentage in that subject for all intermediate third-grade boys. He exhibited no off-task behavior at all in social studies/science. Philip did not need to stay in from recess to complete his assignments. He was only absent two days this year and three days the previous year.

Philip's total achievement test score, 78.7, was sixth highest among third-grade boys, which was not especially high. His IQ score was 118. His highest achievement score was his spelling at 92.8. Reading and mathematics scores were similar, at 84.7 and 86.7, respectively. His social studies score at 47.5 and science score at 23.4 were much lower. Philip was in both the high-ability mathematics class and the high-ability group in the high-ability reading class. He was especially noted for his interest in dinosaurs. At 108 months of age in September, he was one of the oldest third graders, for he had started to school a year later than his birthdate actually required of him.

Philip got on very well with students and teachers. He was one of the boys most liked by other boys. His three closest friends were John, Matthew, and Frank. John and Frank also had extremely low percentages of off-task behavior. John and Matthew were among the top students in the intermediate third grade, as was Philip. John was Philip's closest friend, and he worked hard to match the standards that John set. Philip was extremely well mannered and was very diligent in his work habits.

Despite Philip's obvious enjoyment of school, he believed it started in October and ended in March. However, he could name all the months in order and knew school lasted nine months. He knew exactly how many months he had been in school that year, but he was two days ahead of the actual date when he attempted to give the date of the current day. He could describe his daily schedule in detail, could give the beginning and ending times for the school day, and was one of the very few students who could provide the times for his daily classes; however, he overestimated the length of the day by 1.5 hours. He especially enjoyed mornings, but he thought afternoons went faster. He tended to feel bored in spelling when he had finished his daily assignments. He enjoyed learning new things and especially liked science and mathematics. He judged his work speed to be the same as that of his friends.

Stuart

Stuart's daily off-task behavior in class was minimal at 1.77 percent, and was only 2.09 percent if only academic subjects were considered. It was in spelling that he exhibited his highest percentage of off-task time at 6.06 percent. In mathematics he was off-task 2.11 percent of the time, in reading, 2.01 percent, and in social studies/science, 1.13 percent of the time. In language he was seldom off-task. Stuart rarely looked up while he was working and usually remained kneeling in his desk and hunched over his work until it was completed. He was the only child with such work habits. It was not necessary for him to stay in from recess to finish assignments despite missing 13 days of school during this year. His previous year's absence rate of 11.5 days was similar. This was his first year at Kennedy School, for he had attended another school in Jackson for the first and second grades.

Stuart's ability level, as measured by his achievement score of 69.6, was the same as Allen's and Fred's. However, Stuart's IQ of 137 was slightly higher than their IQ scores. Although Fred was only slightly more off-task than Stuart, Allen's amount of off-task behavior was among the highest observed. Stuart's highest achievement score was in science at 88.7. This was followed by social studies at 80.7 and spelling at 79.7. His mathematics achievement score of 52.5 and reading score at 34.4 were surprisingly low for intermediate third-grade boys. Stuart was in the high-ability group of the low reading class and in the mathematics class with most other third graders. He stood out as one of the most creative and artistic children in his classes. Stuart's age was 102 months at the start of the third grade.

Although Stuart was always included in activities by other boys, he did not have close friends, perhaps because it was his first year at this school. He did prefer the company of boys whose ability and off-task behavior were close to the mean for third-grade boys. He also got on well with teachers and seemed more desirous of feedback from them than most boys although he thought he rarely talked to his teachers.

Stuart had a good grasp of the structure of the year and the school year, for he knew the length of both as well as all the months for each. Although he could provide the correct times for the beginning and end of school each day, he could only narrow the number of hours in the school day to between six and eight. He was aware of his daily class schedule but overestimated the length of reading by an hour even though it was his favorite part of the day. He thought that the afternoon when reading occurred went faster than the morning. Stuart was least interested in mathematics. He regarded his work speed as being similar to that of his friends.

Ted

At 1.45 percent Ted had the least daily off-task time of all the intermediate third-grade boys and the third lowest of all the third graders. His off-task time in academic subjects was only 1.52 percent of the time spent in them. He exhibited no off-task behavior in either mathematics or social studies/science. The subjects with the highest amount of off-task behavior for him were spelling and language with 3.89 percent time off-task in each. That percentage for spelling was actually the lowest percentage of off-task time in spelling among all the third-grade boys. His off-task time in reading amounted to 2.35 percent. Ted occasionally stayed in from recess to finish assignments, for 2.66 percent of his recess time was spent working. This was observed to be primarily a result of his need to complete assignments missed during his 13.5 days of absence this year. The previous year he had missed 8.0 days. Most of his first-grade year had been spent at another school.

Ted's ability level, as measured by his total achievement test score of 57.5, was the same as Tom's among third-grade boys and the same as Maggie's among third-grade girls. Their IQ scores of 120 and 121, respectively, were only slightly less than Ted's 125. His off-task behavior was not similar to theirs, though. His highest achievement score, 89.8, was in social studies and his lowest, 13.3, in spelling was also the lowest for that subject among intermediate boys. That low achievement in spelling coincided with the fact that his was the least amount of off-task time among intermediate boys in that subject. His achievement score in mathematics was 52.5, for science it was 50.5, and for reading 45.5. Although Ted's reading score was higher than Tom's or Stuarts, he was in the low-ability reading group while they were in the high reading ability group in the low-ability reading class. He was in the same mathematics class as most intermediate third graders. In first grade he had received special therapy for speech problems, and there was no evidence of any remaining speech problems. Ted was one of the younger third graders as he was 96 months old in September.

Ted was rarely seen to smile, but he was not unfriendly. Frank, his favorite and closest friend, also had a low percentage of off-task behavior. His friends tended to be the average- or low-ability boys among the intermediate boys. He presented no problems for his teachers.

Ted's conceptual grasp of the year was vague. Like his friend Frank, Ted could not name all the months of the year. Ted could only name nine months and those were out of order. We concluded that school began in July and ended in May and therefore lasted ten months. He overestimated the amount of time he had actually been in school that year by two months (although he would have been correct if school had begun in July as he had said). He was, therefore, correctly calculating the amount of time in school but by using the wrong beginning date, his answer was incorrect. Even though Ted did correctly calculate the number of hours in the school day and could describe the order of his daily schedule, he did not know the times at which the classes occurred. He was one of the students who preferred the beginning of the school year to the rest of it and preferred not to predict future events. His favorite part of the day was science, but there was nothing he actually disliked about school. Ted, as did others with low off-task percentages, felt he had enough free time. Since he became bored if he finished his work early, he was in no hurry to complete it. Ted concluded that he worked at about the same speed as his friends.

Intermediate Third-Grade Girls

Jenny

This intermediate third-grade girl's 9.17 percent of total off-task time daily was the highest for all third-grade girls and the second highest for all third graders. Only one primary boy's percentage of off-task time was greater. At 10.35 percent, Jenny's off-task time for academic subjects was even higher than that of the total daily percentage. Jenny's off-task time in reading, 20.13, was by far the highest of all third graders and three times greater than that of Maggie, the girl with the next highest off-task time in reading for intermediate girls. It was almost twice as high as Peter's off-task time in reading, and he had the highest off-task percentage in the subject among intermediate boys. Jenny also had the highest percentage of off-task time for language of all third graders. Her off-task time in mathematics at 7.96 percent was not out of line with that of other intermediate girls'. Her 9.52 percent of off-task time in spelling was only half that of both Denise and Louise. In language, her off-task time was 6.41 percent and her social studies/science off-task time amounted to 5.5 percent. Not surprisingly, with 26.67 percent, Jenny had the highest percentage of recess time spent working of all intermediate third graders. Of the intermediate third graders, only Allen and Peter came close to this percentage. Jenny's need to finish assignments during recess did not result from absences since she only missed 2.0 days this year compared to 6.5 days absent during the previous year. Her off-task behavior consistently resulted from her penchant for looking around to see what others were doing. She did not just glance around, she watched every distraction available. She was especially busy watching others during reading class because there were always the activities of another reading group to observe and she regularly did this.

Jenny's ability level, as measured by her total achievement test score of 36.4 percent, matched that of a boy and a girl in the primary unit and was the second lowest among intermediate third graders. Her IQ score was 108. Her highest achievement score was in spelling at 85.7, and her reading score of 50.5 was higher than that of several children in the intermediate third grade. Her science score was 38.4, and in social studies it was 25.4. Her mathematics score of 15.3, however, was the third lowest among all third graders. Jenny was in the high-ability group of the low-ability reading class and was in the same mathematics class as most third graders. She was 99 months of age in September. Jenny was one of three left-handed third graders, all of whom were in the intermediate unit of the third grade.

Jenny was a very likeable child for both students and teachers. She got on well with everyone but had three close friends among the intermediate girls. One of these was Stacy, who had the least amount of off-task time--not only of all intermediate girls but of all third graders. Stacy's ability level, however, was lower than Jenny's. Jenny's other two friends were Maggie and Ruth, who after Jenny, had the next highest amounts of off-task time among intermediate third-grade girls.

Jenny knew the order and names of the months in the year but did not know how many months were in the school year. She thought that the school year began in September but did not know when it ended and did not know how long she had been in school. She would not even hazard a guess about the current date or the next day's activities. She overestimated the length of the school day by a half hour although she knew when it began and ended. She left out language and specials when she described her daily schedule and did not know the length of any classes, including reading. She thought noon recess lasted a couple of hours. Mornings went faster than afternoons for her. Her favorite part of the day was dismissal. She liked science, though, partly because it was the last class. Reading bored her with all its work and she felt she sometimes did not have enough time to do all her assignments. She believed that she worked more slowly than her friends. Unlike most children, she thought she did not have enough time to go to the IMC during school and had to go mostly after school.

Maggie

Maggie's daily percentage of off-task behavior amounted to 7.03 percent and diminished slightly to 6.54 percent if only academic subjects were considered. Maggie's off-task behavior was most noticeable in mathematics where it accounted for 10 percent of her time in that class. She was off-task 8.95 percent of her time in spelling, which was not unusual among these third graders. Her off-task time in reading was 7.97 percent of the class time and in language, it was 4.59 percent. Maggie spent only 1.33 percent of the recess time working on the five days she was observed, but that figure was not representative of the extra time she needed to finish assignments. Her parents had to be called in (but without much success) to help handle her chronic inability to complete and turn in assignments by deadlines. She was not allowed to go to an entertainment movie one afternoon as punishment for not finishing her work. She was extremely irritated by this pressure put on her to finish her work on time, and she had no qualms about vocalizing this irritation to the interviewer. She invariably blamed someone else for an assignment she had not completed. Largely because most children did not have this experience, she and Charles were the only ones to note that grades could be reduced by a letter if work was late. Maggie often arrived after the other third graders in the morning. She was repeatedly told to arrive on time but to no particular avail. Maggie was absent 6.5 days this year and 7.0 days the previous year.

Maggie's ability level, was measured by her total achievement test score of 57.5, was similar to Ted's and Tom's. Her IQ score of 121 was also similar to theirs. However, their work habits were much different from hers. Maggie's highest achievement score was 85.7 in spelling. Next highest was 68.6 in social studies and 62.6 in reading. She had scores of 50.5 and 45.5 in science and mathematics, respectively. Maggie belonged to the high-ability reading group of the low-ability reading class and was in the same mathematics class as most intermediate third graders. Maggie was 98 months of age at the beginning of the school year.

Maggie's personal relations with students and teachers were complex and unsatisfactory to all concerned. Even though she considered Ruth to be her best friend, Ruth did not reciprocate. Jenny as well as Helen, a primary third grader, were also regarded as friends by Maggie. Maggie made heavy demands on her friends and did not understand why they were annoyed by her demands. Occasionally they complained to the teacher about her--an unusual behavior among these third graders. Maggie was also uncooperative with teachers and at times even surly. Her behavior toward others was quite different from that of most third graders.

Her grasp of time was fairly accurate, for she knew the order and names of the months of the year. Although she stated school began in August and ended in June, she calculated the number of months in the school year as ten. She, like two other intermediate girls who answered ten months, included all of June in her calculations rather than realizing that only a few days of June should be included. She accurately noted how many months had passed since the beginning of the school year. Despite giving the correct beginning and ending times of the school day, she thought it lasted eight hours. Interestingly, she appeared to think of time as being broken into half-hour blocks and at first did not think she could figure the number of hours within the school day because she did not have enough fingers. She was the only third-grade girl who could tell not only the order of her classes but also the times they began and ended. She liked "specials" best and mathematics and reading least. She would not discuss any future days in school and thought the whole possibility of doing so to be an absurd expectation since they had not happened yet. She did express the hope that they would be better, though. Days were regarded as bad or good days depending on how her friends treated her. She became bored when she had too much to do. Reading period lasted too long while language was too short. She was one of the few children who felt she was not getting enough free time. She definitely did not think school provided sufficient time for her to complete her work. Still, she thought she worked faster in reading and slower in mathematics than her friends did. Only she, Stacy, and Beverly, a primary third-grade girl, of all third graders did not believe noon recess was long enough.

Ruth

Ruth's total amount of daily off-task behavior, 5.94 percent, was only slightly higher than the mean of 5.71 percent for intermediate third-grade girls. Her percentage of off-task behavior was higher when only academic subjects were considered, for then it was 6.84 percent. Her off-task time of 10.44 percent in mathematics was the highest among intermediate third graders and second highest for all third graders. Ruth finished her assignments and then proceeded to chat with others in the class. She was off-task 10.6 percent of the time in spelling as well. In social studies/science her off-task time accounted for 5.76 percent of the class time, while 5.62 percent of her time in reading and 2.38 percent of her time in language were spent off-task. She never had to use recess time to finish assignments. Her absence rate of four days this year was consistent with four days during the previous year.

Ruth's constantly alert behavior and her verbal ability belied the fact that her total achievement score was 73.6 and her IQ score was 107. Her reading achievement score, 80.7, was her highest and spelling and science tied for second with 79.7. Her social studies score was 57.5, and her mathematics score was 52.5. She was placed in the high-ability reading group in the high-ability class and was in the same mathematics class as most intermediate third graders. One aspect of her home background that may have had some effect on her ability in reading was that her parents refused to have a T.V. and insisted that she read at home every day. Her age at the beginning of the school year was 103 months.

Ruth was well liked by both students and teachers. She was part of the friendship group which included Jenny, Stacy, and Maggie. However, she had persistent problems with Maggie's possessiveness. Although her percentage of off-task time was close to the mean for intermediate girls, her friends' percentages of off-task time were at both extremes.

Ruth, as Maggie, had a fairly accurate grasp of the framework of time. She knew the order and names of the months in the year. Unlike Maggie, when Ruth calculated the number of months in the school year beginning in August and ending in June she arrived at nine, not ten. She was behind by one day, however, in attaching a date to the current day. Instead of saying that school lasted 6.5 hours as her beginning and ending times for the school day indicated, she settled for six or seven hours as the length of the school day. She could describe her daily schedule and although she could not provide the clock times for her classes, she could provide the correct number of minutes which each class lasted. Her favorite parts of the day were mathematics, spelling, and the opportunity for exercise at recess. Language period she regarded as being too short. Her favorite part of the school year was the first quarter when the school year still held some novelty. Afternoons went faster than mornings for her despite the fact that reading period was too long. Afternoons were also preferable because it was sunnier then. She believed that she worked at the same speed as her friends. She could talk about the past as well as the future. She did not plan to be just a nurse but to have an M.S. in nursing.

Denise

At 5.9 percent, Denise's percentage of daily total off-task behavior was almost the same as Ruth's and Paul's. If only academic subjects are considered, though, her percentage of off-task behavior rose to 7.04 percent of her class time in those subjects. Denise's highest percentage of off-task behavior appeared in spelling at 21.73 percent. This was the third highest amount for that subject among all intermediate third graders. Only Robert's and Louise's percentages were higher. Denise finished her assignments quickly in spelling. Her off-task time in language, 11.39 percent, was the highest among intermediate girls for that subject and occurred largely for the same reason as her off-task time in spelling. In reading, 6.62 percent of her time was spent off-task and in social studies/science, 5 percent was off-task. Mathematics gave her the least opportunity for off-task time at 2.8 percent. Denise did not need to stay in at recess to finish school tasks. Her absence rate was quite low at 2.0 days for this year and 4.5 days for the previous year.

Denise's ability level, as measured by her total achievement test score of 85.7, was the second highest among intermediate girls and the sixth highest among both intermediate third graders and all third graders. Her IQ score was 125. Her highest achievement score of 97.9 was in spelling and her score in reading was a close second at 96.9. Her mathematics score of 89.8 was equal to Alex's and was higher than Philip's, but she was not placed in the higher ability mathematics class. Her social studies score was 47.5 and her science score of 11.3 was one of the lowest among third graders. She was placed in the high ability group of the high reading class. She was 103 months of age at the beginning of the school year. Denise was one of the three left-handed third graders.

Although friendly with all the third graders, Denise's closest friends included Karen, Louise, and Laura. These girls were relatively similar to Denise in their ability levels and off-task behavior. All but Louise were in the same high-ability reading class. Denise's achievement score among girls was second only to that of Karen, whom she regarded as a best friend. Denise also got on well with her teachers.

Denise's grasp of time was somewhat inconsistent although she quite frequently wore a watch. She knew the months of the year and also knew that the school year began in August or September and ended in June, but she concluded that school lasted ten months instead of nine. She treated parts of months as if they were whole months. With this rationale she was able in mid-March to state without seeing any conflict that eight months of school had passed and that three more months were left in the school year. Although she provided the correct times for the beginning and ending of school, she thought that the school day lasted ten hours. The daily schedule was easy for her to describe in order but times of classes were not. She liked morning with mathematics and language best and she did not like reading and science which occurred in the afternoon. She did not have much to say about recent past events nor about the events of the next week, but she could note differences between the previous year and the current one. Like Ruth, Denise found the beginning of the year preferable to the rest of it. Denise believed that she worked more slowly than her friends.

Laura

Laura's 5.77 percent of off-task behavior was very close to the mean of 5.71 percent for intermediate third-grade girls. If only academic subjects are considered, however, her percent of off-task time rose to 6.69 percent. Her percentage of off-task time was highest for spelling at 13.23 percent. She was off-task 7.92 percent of the time in mathematics and 6.66 percent of the time in language. In social studies/science her percentage of off-task time was 5.83 percent and in reading it was 3.77 percent. Laura did not need to spend time during recess to finish her assignments. She missed six days of school during the current year and eight the previous year. She had moved into the Jackson school district at the latter part of the previous school year.

Laura's ability level as measured by her total achievement test score was 41.5 and her IQ score was 112. This put her slightly below the mean for intermediate girls. Her classroom behavior was more mature than her ability scores indicated. Her highest achievement score was in social studies at 57.5. Her reading score was 45.5, the same as Frank's and Ted's, yet they were in the low-ability group of the low reading class and she was in the low ability group of the high reading class. The teachers decided Laura should be given extra remedial work by the Title I teacher for two half-hour periods for a week for two months during her regular reading time to help correct deficiencies rather than move her to the low-ability reading class. Her spelling score was 39.4, and her mathematics score was 38.4. Her lowest score, 30.4, was in science. She was in the same mathematics class as most intermediate third graders.

Laura was the most popular of all the intermediate girls. One of her closest friends was Karen, the highest ability intermediate girl. Karen's off-task time was immediately below Laura's in the same range for intermediate third-grade girls. Laura's off-task time was at about the mean for third-grade girls and her popularity was highest. Denise was a friend, too. Even one primary third-grade girl claimed Laura as a friend. Her teachers found her equally appealing. Laura was a self-directed and considerate individual who took pity on the researcher and offered her a book to look at since she feared the researcher might be growing tired of just watching third graders all day!

Her grasp of time was less well-developed than that of some other intermediate girls. She knew the names and the order of the months of the year, but she only knew that school began in August and could not say when it ended nor how many months it lasted. Nevertheless, she knew correctly how many months she had been in school so far that year. She closely approximated the number of hours in school as being seven and provided the correct starting and stopping times for the school day. Laura knew the order of classes in her daily schedule but overestimated by a half hour the length of reading, which she did not like and wanted to shorten. She thought noon recess only lasted a half hour. Laura liked mathematics and spelling and studying foreign countries. She could converse about both past and future events. She accurately surmised that she worked more slowly than her friends.

Karen

Karen's percentage of daily off-task time in the classroom amounted to 4.59 percent but rose to 6.17 percent when only academic subjects were considered. In mathematics she was off-task 7.5 percent of the time and this was mostly because she finished her assignments before the end of the period. She was off-task 6.66 percent of the time in spelling and 3.94 percent of the time in reading. In language, 3.57 percent of her time was spent off-task.

For social studies/science she exhibited no off-task behavior. Karen stayed in to finish work during 6.66 percent of her recess time. This tended to occur when she had not finished a language assignment. She was absent three days this year and only one day the previous year.

Karen's ability level, according to her achievement test score of 96.9, was the highest among the third-grade girls and second only to John's for all third graders. Her IQ score was 131. Karen had achievement test scores of 96.9 for both reading and social studies. She shared that high reading score with John, Paul, and Denise. Her social studies score was equaled only by Matthew and Peter. Her mathematics score of 93.8 was second only to John's, yet she was not placed in the higher ability mathematics class. Her spelling score was lower at 85.7. Her lowest score was in science, 65.6. She was in the high-ability group in the high reading class. Karen was 97 months of age at the start of the school year.

Karen got on well with other children and with most teachers. Denise and Laura were her best friends. Denise, Laura, and Karen each were off-task about the same percentage of time and were together in most classes, including high-ability reading. Although most of her teachers regarded Karen as cooperative and pleasant, Karen's reading teacher tended to find fault with Karen, and Karen responded by regarding reading as her least liked subject despite her high score for that subject.

Karen's general grasp of time was fairly good among third graders, but she lacked clarity about details. She knew the months of the year but believed the school year was ten months long. Like Denise and Maggie, she tended to round fractions of months upward rather than leave them as fractions. If school began in late August and ended in June, it therefore lasted ten months rather than 9.5. She did the same thing in describing the number of hours in the school day. Instead of saying 6 hours and 40 minutes, as indicated by the times she provided for the beginning and ending of the school day, she said the day lasted seven hours. Unlike the high-ability boys, Karen was only able to indicate the order of classes in her daily schedule and not the exact times at which they occurred. She did correctly estimate the length of the reading period. Also unlike them, she was not willing to predict or discuss events in the future although she was one of the few students actively looking forward to the last day of school. Her favorite parts of the day were mathematics, noon recess, and "specials," especially art. She preferred the morning to the afternoon when reading occurred. She wanted to lengthen language so that she could get all the assignments done. Only she and some primary unit students believed that if one finished work early. one should check it. Karen occasionally wore a watch but mainly as jewelry. She believed she worked at the same speed as her friends although they believed they worked more slowly than she.

Louise

Louise's 4.29 percent of daily off-task time increased to only 4.99 percent for academic subjects only. Her amount of off-task time in spelling, however, amounted to 21.91 percent of her time in that subject, the percentage highest among all the girls and second highest among intermediate third graders. Only Robert's off-task time in spelling exceeded hers. Louise did not initiate conversations, but she was more than willing to respond. She often wound up with Charles as a spelling partner because no one else particularly wanted to work with him, and when he was off-task she was off-task as well. However, her off-task behavior continued after his departure because she was then left without a regular partner for spelling practice. Her off-task behavior in other subjects was much less than in spelling. In reading, she was off-task 4.9 percent of the time, but in mathematics only 1.53 percent, in language 1.14 percent, and in social studies/science .99 percent of the time. Louise, like Karen, had to use 6.66 percent of her recess time to finish assignments, but this was largely to finish work missed during her 16.5 days absent this year. The previous year she had missed 20 days of school.

Louise's total achievement score of 78.7 was the same as Philip's. However, unlike him, she was in the low-ability reading class's low-ability group and was in the mathematics class with most third graders. She was the only intermediate third-grade girl in the low-ability reading group of the low reading class. Both her achievement score and her IQ score, 123, put her in third place in ability level among intermediate third-grade girls and among all third-grade girls. Her highest achievement score, 88.7, was in science. Her mathematics score was 76.6, while those for social studies and spelling were 86.8 and 65.6, respectively. Her lowest score, 54.5, was in reading. Like her friend Denise, Louise was 103 months of age in September.

Louise got along well with all children and teachers. Her friendship preferences were interesting in that unlike the other intermediate third-grade girls, she had no close girl friends and preferred to talk to the high-ability boys, especially John and Matthew but also Philip. She did join in activities involving Karen and Laura, but she preferred the companionship of the boys. During the first observation day, the researcher mistook Louise for a boy. Louise's consideration for other children was noted by her teachers. She did not like naughty children, though.

Louise's sense of time was less well developed than her ability level would suggest. Although she knew the months of the year and the month in which school began, she did not know when school ended or how long the school year lasted. As did Karen, Louise rounded fractions of hours upward so that despite giving the correct beginning and ending times, she concluded there were seven hours in the school day. She could provide an outline of her daily schedule but would not suggest how long any classes lasted. Despite being in the lowest ability group in reading, reading was her favorite part of the day. Art was also a favorite on the days when it occurred. Her least favorite part of the day was mathematics. Although mornings went faster for her than afternoons, she preferred afternoons. Similarly to her friend, John, she liked report card days the best. Unlike him, though, Louise's time sense did not extend very far into the future; she would talk about the next day but not the next week. She thought she worked at the same speed as her friends.

Stacy

Stacy's 1.28 percent of daily off-task time was the lowest, not only among third-grade girls but also among all third graders. Her off-task time for academic subjects was only slightly higher at 1.52 percent. Her 3.03 percent of off-task time in spelling was the highest among all her subjects and yet was the lowest amount for spelling among all intermediate third graders. At 2.01 percent she also had the lowest off-task time in reading of all intermediate third graders. Her time off-task in mathematics amounted to only 1.4 percent of her time in that subject, and in language her percentage of off-task time was 1.35 percent. Despite Stacy's minimal off-task time, she had to spend 9.33 percent of her recess time finishing assignments. Her absence rate of 12 days this year was less a reason for needing this extra time than was her slow work speed in class. The previous year when she had attended another school in the district, she had missed 23.5 days of school.

This girl's ability level was among the lowest for all third graders. Her 15.3 total achievement test score was third lowest among third graders and her IQ score of 86 was the lowest. Her reading score at 57.5, however was higher than those of at least nine other intermediate third graders and was the same as Fred's. Stacy was in the high-ability group in the low-ability reading class. Her spelling score was 34.4. Her low mathematics score of 11.3 was equaled only by the lowest primary third grade boys. She was in the same mathematics class as most intermediate third graders. Her science score was also 11.3, but so was that of the higher ability Denise. At 6.2, her social studies score was the second lowest among all third graders. Stacy, like Tom, whom whe liked, was 107 months of age in September, having been born in October of the year prior to the year in which most current third graders were born.

Stacy's friends among intermediate third grade girls were those who ranked in the bottom half of that group in terms of ability level. Stacy's best friend was Jenny, who had the highest amount of off-task time among intermediate third graders. Also, Jenny's total achievement test score was the second lowest in that group and only ahead of Stacy's. Stacy tended to seek out her reading/mathematics teacher more than did the other students, and she regarded this teacher as one of her best friends.

Stacy's grasp of time frameworks was extremely hazy. She knew only eight of the months of the year and had no idea about the length of the school year or when it had begun. At the end of February, she thought she had been in school for 15 weeks and she gave that answer because it had just popped into her head. She became confused between months and years and thought Christmas had occurred two years before rather than two months. She did know that the school year would end in May. Stacy was two days ahead when she tried to give the date of the current day. She knew her age, yet insisted she was born in 1976. As for the length of the school day, it lasted only three hours. It ended at 4:00 p.m. and began when both hands were on ten, which was actually when she first looked at the clock for the day. She could not describe her daily schedule and had no idea as to how long any of her classes lasted. Stacy could talk about previous days but not future ones. Despite her low ability in mathematics, she liked it the most and wanted to lengthen it. She liked reading least because she did not have enough time to get her work done. Stacy's favorite part of the day was dismissal. Her favorite part of the year was the beginning when she first began making friends. She seldom had free time except during recess and wished she had more time to talk to her friends. She knew she worked more slowly than her friends.

Primary Third-Grade Boys

Billy

Billy is notable for having, at 11.02 percent, the highest amount of off-task behavior for all third graders. If only academic subjects are considered, this percentage was reduced to 10.88 percent. In spelling, Billy was off-task 16.66 percent of the time, and in reading he was off-task 14.45 percent of the time. For social studies/science his percentage of off-task time amounted to 12.5 percent. Billy was off-task 11.95 percent of the time in his mathematics class. In language arts, however, Billy had no off-task time. He was a slow and easily distracted worker and often was one of the last to finish assignments if he completed them at all during class. As a result, 58.66 percent of his recess time was spent inside working. That was the second highest percentage among primary third graders, as well as among all third graders. Billy missed 7.5 days of school this year and 5.0 days the previous year.

His ability level, as measured by achievement test scores, was similar to Stacy's, but his IQ at 119 was much higher than her 86 IQ. Billy's achievement score was one of the lowest among primary third graders. His total achievement score was 18.3 with 57.5 in reading, 38.4 in science, 11.3 in mathematics, 7.2 in spelling, and 6.2 in social studies. He was in the middle-ability reading group in the primary third-grade reading class.

Billy's total achievement score was exactly the same as Jack's, the primary boy he considered his best friend. Jack's off-task behavior was only half that of Billy's, though. Billy spent part of his off-task time just watching Jack on the other side of room. Billy and Jack were constantly having disputes which Jack reported to the teacher. This often resulted in punishment for Billy and sometimes for Jack. Billy always appeared to be rather lost no matter what was going on. Aside from his complex relations with Jack, he was friends with two other primary boys, Dennis and Dan.

His understanding of time frameworks was fairly well developed. Although he named the months out of order, he knew there were nine months in the school year and how many of them had already occurred so far this year. He knew the correct date. Although Billy knew the beginning and ending times of the school day, he underestimated the length of the school day as being five hours long. He left out storytime as did almost all other primary third graders who attempted to describe their daily schedule. He knew the length of some classes, such as reading, but thought (incorrectly) that his favorite subject, physical education, lasted longer than other specials. Billy also liked recess and disliked mathematics. He was willing and able to talk about past as well as future events. He thought he sometimes had too much to do in school, especially in reading. He was one of the few third graders who did not remember looking at the clock during the day. Despite his obvious slowness in completing his work, he still thought he worked at the same speed as his friends, and when he was actually working, he probably did work at about their speed.

Sam

Sam's 5.63 percent of off-task time was close to the mean of 5.05 percent for the primary third-grade boys. When only academic subjects were included, his off-task percentage fell to 4.52 percent. Sam's percentage of daily off-task behavior was the second highest, not only among primary third-grade boys, but also among all primary third graders. His 34.48 percent of off-task time in spelling was the highest for all third graders. This class allowed the greatest opportunity among primary third-grade classes for self-determined use of one's time. In subjects that were more teacher-directed, Sam's off-task time was low. In the most teacher-directed academic subject, social studies/science, he had no off-task time at all. In the shortest and often infrequent subjects considered to be part of language arts, he had none either. In reading he was off-task only 3.94 percent of his time and in mathematics 3.09 percent of the time. Sam held the record among third graders for his 77.33 percent of recess time spent inside working. He never seemed to get caught up. Although he was absent from school 11 days this year, his slow work habits were the major cause of his recess time being used for school work. The previous year he had been absent 19 days, which may have affected his grasp of skills that he was expected to have to succeed in the third grade.

Sam was the only third grader not promoted to the fourth grade for the following year. He will be placed in the intermediate third-grade class. His ability level as measured by total achievement test score, was the lowest for primary boys at 12.3 and the second lowest score among all third graders. His IQ score was 105. His highest score, 58.5, was in spelling where his highest amount of off-task time occurred. His science score was 30.4 and that for social studies, 14.3. Both his reading and mathematics scores were 11.3. Sam received Title I remedial reading instruction with one other student for three half-hour periods during his regular reading class each week. He was in the middle-ability group in his reading class. Sam was 98 months of age at the beginning of the school year.

Sam had no close friends in his class. He did talk to other children, but he was not involved in activities with them very much. He spent more time with the teacher than did most third graders because of the extra time he spent in recess. He was not deliberately uncooperative with her requests; rather, he just seemed to forget them.

Sam's weak grasp of time concepts corresponded with his slow work habits. He could name only ten months and these were out of order. Interestingly, he believed not all school years were the same length since some went more slowly than others. This year was a particularly slow year. He guessed that the school year began around November or December and ran to April or May. As for knowing at what point he was currently in the school year, all he could say was that he was in the second semester without being able to explain how long a semester was. He did not know the current date at all and was one of the few students who did not know how long it had been since Christmas. Sam was willing to guess how long it was until the end of the school year but underestimated that time by a month. Nor surprisingly, he believed the school day was 12 hours long despite the fact that he correctly knew the time it began and ended. In describing his daily schedule, he skipped a storytime as did most primary third graders but unlike them, he left out morning recess which for him almost never existed. He did not know how long his classes lasted. He generally remembered to go to his Title I reading class at the right time, but occasionally he would set off for it a few minutes too early and have to be called back to wait. He would talk about recent past events but not about future ones other than the end of school. Physical education was his favorite part of the day and mathematics the part he liked least. Amazingly, what Sam liked most about school was the opportunity to read and learn. He wished he had more time to go to the IMC. Although he knew he worked more slowly than others, he still claimed that he was actually given enough time in school to complete his assignments. Apparently Sam regarded his inability to complete assignments in the allotted time as his own fault and not the fault of the schedule.

Jack

Jack's off-task time amounted to 5.32 percent of his total class time but fell to 3.85 percent when only academic subjects were included. The class in which he exhibited the most off-task time, 7.54 percent, was mathematics where he finished assignments quickly although not necessarily accurately. His off-task time in language arts amounted to 5.12 percent of the time in that subject. In spelling his off-task time was 3.44 percent and in reading, 1.75 percent, which was the lowest percentage of off-task time for reading among primary third-grade boys. In social studies/science he exhibited no off-task behavior while being observed. Jack was required to use 37.33 percent of his recess time working. This time was spent mostly on reading, the subject in which he had little off-task time. His recess working time was not particularly productive, however, since he was inclined to talk to whomever else was staying in that day--which may explain why he needed such a relatively high percentage of recess time to finish his work. His absence rate was 4.0 days this year and 8.5 days the previous year.

Jack had the same total achievement score as Billy, 18.3, and his IQ score of 113 was only slightly less than Billy's 119. Reading and science provided his highest achievement scores with

30.4 in each. His score in mathematics was 28.4. Both his spelling and social studies scores were 10.2. Jack was in the highest ability reading group. He was 100 months of age at the beginning of the school year.

Jack was easily the most popular student among both the primary third-grade boys and girls. Although he refused to recognize Billy as a friend (despite Billy's belief that Jack was his best friend), he reciprocated friendships with Dan and Ralph, whose off-task percentages were less than his. He regarded Fred in the intermediate third grade as one of his friends. Jack appeared to get on well with his teachers most of the time, but he did occasionally receive punishment and reprimands in his academic subjects and music.

Commensurate with his achievement level, Jack's grasp of time was not well developed. He could name only eight months of the year and these were out of order. He did not know either the number of months in the school year or when it ended. He believed the school year began in June or July. He had no idea how long he had been in school so far that year and was one day behind in giving the day's date. Like Sam, he did not know how many months had passed since Christmas. He believed there were eight hours in the school day despite the fact that he thought school began at 9:00 a.m. and was over at 3:00 p.m. He left out only storytime in describing his schedule and knew that reading lasted an hour.

Because he needed almost all the time allotted to reading to finish the assignments in that subject, he was unable to go to the IMC as much as he wanted to. Mathematics, where he had the most off-task time, was his favorite part of the day and the class he would like to lengthen. He could talk about recent events but not future ones. He never experienced busy days in school, an extremely rare view for third graders. Jack was aware that his friends did not all work at the same rate of speed as he did, for he thought he worked faster than some and at about the same speed as others.

Dennis

Dennis' percentage of daily off-task time, at 5.14 percent, was very close to the mean of 5.05 percent for primary third-grade boys. His percentage of off-task time for academic subjects only was similar at 5.1 percent. It was in spelling that Dennis was off-task most often, with 11.53 percent of his time in that subject being off-task. In reading he was off-task 6.06 percent of the time. In mathematics his off-task time amounted to 3.84 percent of that class while in social studies/science he was off-task the least at 3.79 percent. He was not off-task in language arts. Dennis rarely had to use recess time to finish assignments. He missed 6.5 days of school this year and 2.5 days in second grade.

Dennis' ability level, as measured by his total achievement test score, 64.6, tied with Jane's as the highest among primary third graders. His IQ score was 126. It was partly because of misbehavior the previous year involving Robert that Dennis was kept in the primary third grade while Robert was placed in the intermediate third grade. Although Robert's achievement score was actually lower than that of Dennis, Dennis had a history of tantrums which suggested that emotionally he belonged with the less mature primary third graders. His rigid perspective was similar to that of an intermediate third grader, Gary, who had the same total achievement test score as Dennis. Jane, although having the same score, did not display this unchildlike inflexibility. As for specific achievement scores, Dennis' highest scores were in social studies at 89.4 and science at 79.7. His mathematics score was 65.6 and his reading score, 41.5. His lowest score, 23.4, was in spelling. He was in the middle-ability group in reading class. Dennis was 108 months of age at the beginning of third grade. He was older than most third graders because he had been placed in a transitional first-grade class after kindergarten rather than in the regular first grade. Therefore, he had two years in first grade.

Dennis was apparently becoming better adjusted to other people and to school, which he liked much more this year because he had friends. He still reciprocated Robert's friendship but considered Billy and Jack as his friends, too. These latter two friendships were interesting because their classroom behavior was the least satisfactory among third-grade boys and their ability levels were almost the lowest while Dennis' was the highest among primary third-grade boys. Dennis' and Jack's amounts of off-task behavior were almost the same, though. Dennis and Billy gave evidence of being the least emotionally mature of the primary third-grade boys. Dennis' relationships with his teachers were generally comparable to a truce. When he believed he was being forced to accede to their demands, an occasional tantrum and a brief period of withdrawal still came over him.

Dennis' grasp of time was not well developed although he was one of the few primary third graders to wear a watch occasionally. He knew the months of the year and their order of occurrence but confessed that on some days he did not remember them. Although he knew the months in which school began and ended, he thought there were only four to six months in the school year. He knew neither how long he had been in school so far that year nor the date of the current day although he did know the month. He did not know either how long it had been since Christmas or how long it was until the end of the school year. Although he had the school day starting incorrectly at 8:00 a.m., he correctly calculated that if it ended at 3:00 p.m., it must have seven hours in it. That amount of time was incorrect because his facts were incorrect, but his logic was correct. Although he could describe his daily schedule, he did not have a good grasp of how long his classes lasted. He described reading as lasting a half hour and 15 minutes. Maggie in the intermediate unit was the only other child who appeared to think of time in half-hour blocks rather than in hours. Dennis was willing and able to recall recent past events but would hazard no thoughts about the future. He never felt bored in school and enjoyed mathematics and physical education the most. He would have lengthened physical education. Social studies/science could have been longer, but he would have abolished music. Afternoons went faster than mornings because the fun subjects occurred then. He suspected that he was having to do more work at the end of the year than at the beginning, which had seemed to go faster. Dennis believed that he worked faster than some friends and more slowly than others.

Eddy

Eddy's 4.95 percent of daily off-task time was close to the mean of 5.05 percent of off-task time for primary third-grade boys. His percentage increased to 6.13 percent if only academic subjects were considered. His highest amounts of off-task time occurred in spelling with 14.89 percent of his time off-task and social studies/science with 14.1 percent. In reading he was off-task 4.76 percent of the time and in mathematics, 4 percent. In language arts he exhibited no off-task behavior. Most of his off-task behavior was simply the result of work stoppage to gaze around at others and was not disruptive. Eddy used 21.33 percent of his recess time to finish assignments. He was absent 5.5 days this year and 3.0

days the previous year when he had attended a different school in the same district.

His ability level, according to his achievement test score of 36.4, was third highest among the primary boys. This was the same score as that of Jenny in the intermediate unit and Kate in the primary unit. However, Jenny's off-task time was twice that of Eddy's, and Kate's was only half as much. Eddy's IQ score of 118 was the same as Philip, one of the high-achieving boys in the intermediate unit. Eddy's science score was 65.6 and his mathematics score was 61.5. His social studies score, however, was 36.4. His score for spelling, where his off-task behavior was most evident, was 29.4. In reading he was placed in the middle-ability group. Eddy was 99 months of age in September.

Eddy did not have strong friendship ties with any of the other third graders. He liked Jack and Kate, but they did not reciprocate. He also liked one of the mainstreamed learning disability students who was noted for his outlandish but entertaining stories. Eddy's contact with his teachers was minimal. He had a slight speech defect and gave the appearance of being removed from whatever was going on around him.

Eddy's notions about time had some vague areas. He knew 11 months of the year but not in the correct order. He knew there were about eight months in the school year. He underestimated the amount of time he had been in school that year by a month but overestimated by a month the number of months since Christmas. He did, however, know exactly how many months were left before the end of school. He knew it ended in May because the last day coincided with his birthday. He incorrectly labeled the first month of the school year as January but knew that the first month fell in autumn. He thought the school day was seven hours long because he believed it began at 8:00 rather than 8:30 a.m. He was the only primary third grader to include all his classes in describing his daily schedule. He thought that reading lasted between one and two hours, and since it lasted 75 minutes in a sense he was correct. He noted that it was the arrival of different children that signalled to him when it was time for a new subject to begin. He could talk about the recent past but not the future. Specials and science, which he would lengthen, were his favorite parts of the day and mathematics the part he liked least. Despite the occurrence of his favorite subjects in the afternoon, mornings went faster than afternoons. Eddy assumed he worked at the same speed as the people he considered friends.

Dan

Dan's amount of off-task time, 4.94 percent, was almost exactly the same as Eddy's. It rose to 5.34 percent if only academic subjects are considered. His off-task time in spelling was 22.9 percent which, after Sam's, was the highest for all third graders. His social studies/science off-task time was 6.49 percent.

In reading, his off-task time amounted to merely 2.36 percent of his time and in mathematics it was 2.17 percent. In language arts Dan was off-task 2 percent of his time there. His use of recess time for working was irregular, for there were occasional weeks when he apparently was behind and had to stay in. His absence rate for the current year was 2.5 days, and during the previous year he had missed 3.0 days.

His ability level, as measured by his total achievement test score of 31.4, was similar to those of Ralph, Helen, and Martha, all of whom had slightly less off-task time. His IQ score was 106. His highest achievement test score, 61.6, occurred in mathematics with his next highest score of 57.5 being in social studies. His science score was 50.5. His spelling score was 34.4 and his reading score was 14.3. He was in the middle-ability group in his reading class. Dan had an early birthday and so was 103 months of age in September.

Dan's closest friends were Jack and Billy, but he generally did not appear to have close ties with other children. His contact with teachers was minimal, partly because he perceived them as usually being too busy.

His grasp of time was somewhat more developed than those of his friends. He knew the months of the year in order and the month that school began. However, he did not know either the length of the school year or when it would end. Dan did not speak in terms of months when pinpointing his location in the school year. Instead, he regarded it as having lasted half a year plus one month. This perception was accurate if Christmas was taken to be the dividing point of the year. Dan overestimated the number of hours in the school day as being seven, although his answer was correct in relation to the starting and ending times of 8:00 a.m. and 3:00 p.m. that he provided. He left out storytime in describing his daily schedule and perceived reading and noon recess as each lasting one hour and five minutes. Mathematics, as it was for Jack but not for most primary third-grade boys, was Dan's favorite subject. Handwriting did not last long enough for him. He could talk about the future and the past in some detail. He believed that he worked at the same speed as his friends.

Ralph

Ralph's off-task time accounted for 3.97 percent of his total class time daily. This percentage dropped to 2.99 percent if only academic subjects were considered. Ralph's off-task time was fairly consistent for all of his academic subjects. He was off-task the most in mathematics, with 4.54 percent of his time there being off-task. In spelling he was off-task 3.22 percent of the time. In reading his off-task time accounted for 2.95 percent of his time and in social studies/science for 2.59 percent of his time. In language arts he was off-task 1.72 percent of the time. At 49.33 percent, Ralph had the fourth highest percentage among all third graders of recess time spent working inside. However, not all that inside recess work time was actually used to complete his work. Ralph tended to talk quite a lot to anyone who would listen during his recess time and then would settle down to finish his assignment in the last few minutes. Part of Ralph's need for extra time was created by his absence rate of 14 days this year. The previous year he had been absent 11 days. During first grade and half of second grade he had attended schools in other states and had apparently not begun first grade until October of the year he was eligible to attend.

Ralph had the same ability level, according to his total achievement score of 31.4, as Dan, Martha, and Helen. His IQ score was 102. Ralph's highest achievement test score, 38.4, was in science. He had 34.4 in reading, 28.4 in mathematics , 19.3 in social studies, and 13.3 in spelling. He was in the middle-ability reading group. His age at the beginning of September was 97 months.

Ralph was an affable child who readily conversed with both children and adults. He had a pleasant and obvious sense of humor. Ralph and Jack were close friends. He, as did Dennis, also found the mainstreamed learning disability student with the entertaining tales to be of interest. Ralph got on well with his teachers. He was cooperative and tried hard to do what he was told although he was occasionally distracted by something he regarded as amusing.

Ralph's sense of time was one of the least developed among third graders. He had been given a watch for Christmas and wore it daily but it had somehow disappeared after about a month. Ralph could name only five months of the year, and those were out of order and did not even include his birthday month. He had no idea about the length of the school year but thought it began in August or October. In March, he thought he had been in school about a year. He did not know the year in which he had been born. He had no idea how long it had been since Christmas or how long it would be until the end of school. Although he gave the hours of the school day as 8:30 a.m. to 3:00 p.m., he had no idea how many hours that involved. He believed noon recess lasted four to five hours. Reading seemed to last three or four hours even though he liked it. Mathematics was definitely too long. He left out storytime and social studies/science in describing his daily schedule and was the only child who did not know the days on which each special subject occurred. He could talk about the previous day and the next day but not the more distant future or the following week. Although he liked everything about school, he especially liked physical education, which he would lengthen. He also felt that he could do without music. For him the differences between weeks centered around whether they were easy or hard. He believed that he worked faster than his friends.

George

Off-task behavior accounted for only 2.61 percent of George's class time, but it rose slightly to 2.62 percent for academic subjects only. His spelling off-task time was his highest at 11.53 percent. This behavior occurred in spelling largely because he had to wait for his friend Chris to finish before they could play a spelling game together. For his other subjects, his off-task time was much less. In reading he was off-task 2.77 percent of the time, in mathematics 2 percent, and in social studies/science, 1.61 percent. He was seldom off-task in language arts. George used 18.66 percent of his recess time to finish assignments, but as the year progressed he stayed in less and less. He was the only child who had no absences either this year or the previous year.

George's ability level, as measured by his total achievement test score of 50.5, was second only to Dennis and Jane among primary third graders and was equal to that of Frank and Robert, in the intermediate third grade. His IQ score was 114. His highest achievement score was 89.8 in social studies and, with Dennis', was the highest in that subject for primary third graders. It was also the same as John's and Alex's score in that subject, and they ranked first and third among boys in total achievement test scores. In science his score was 65.6. His other scores were lower, though, with 34.4 in reading, 28.4 in mathematics, and 17.3 in spelling. George was in the low-ability reading group and went to three half-hour sessions of Title I remedial reading each week with four other students. Two of these sessions occurred during his regular reading time and the other occurred during storytime and part of mathematics. He was the second oldest third grader at 109 months of age at the beginning of the school year. George had repeated the first grade.

George's best friend was Chris, who had even less off-task time than George. Chris' ability level according to achievement scores was lower than George's but higher than George's in terms of IQ. Chris was within the usual third-grade age range and, therefore, younger than George. They were in the same Title I reading class and were automatically partners whenever partners were required. George got on well with teachers but had minimal contact with them except for the teacher of his Title I reading class. He appeared quite lively there.

George's grasp of time concepts was rather weak. He knew the months and their order in the year but had no idea about the length of the school year and even thought it began in March. He had no idea about how long he had been in school that year. Christmas had happened a few months previously but he could not be more specific. He did not know the number of hours in the school day despite being able to give the hours when it began and ended. In outlining his daily schedule he omitted storytime, "specials," and even lunch. He would not risk a guess about the length of reading, possibly because of the complications arising from the need to include hours for both Title I reading and regular reading. He could talk about the previous day and the following one but not about the more distant future of the following week. George liked school because he liked to learn, yet what he disliked most about school was the work. He believed there was too much to do in school. Science and the specials were his favorite subjects. Physical education was one class he would lengthen. Although mathematics could be boring, he did not suggest shortening it. He correctly surmised that he worked faster than his friends.

Chris

Chris had the lowest amount of off-task time among primary third-grade boys, and his 1.89 percent was the third lowest among all boys. His off-task time for academic subjects only was virtually the same at 1.87 percent. Chris' highest amount of off-task time took place in language arts with 4.47 percent off-task behavior. In social studies/science his percentage of off-task time was 2.85 percent and in reading, 2.25 percent. He exhibited no off-task behavior in either spelling or mathematics. Chris rarely needed recess time to complete his assignments and he was absent only 2.5 days this year. In second grade, however, he had missed 12 days of school.

Chris' rather low ability level as measured by his total achievement test score of 26.4 differed from the ability level suggested by his IQ score of 128. His was the highest IQ score among primary third graders and was the same as that of Fred in the intermediate third grade. His science score of 98.9 was the highest among all third graders and his social studies score of 80.7 also was relatively high. However, his mathematics score was 38.4, spelling was 17.3, and reading was only 7.2. He had three half-hour sessions of Title I reading each week with four other students including his best friend George. Two of these sessions occurred during his regular reading class and one replaced storytime and part of mathematics. He was in the low-ability group in his regular reading class. Chris was 101 months of age at the beginning of the school year.

Chris was a friendly child although perhaps not as clean as some of his teachers would have wished. Chris' best friend was George, but Chris and Matthew in the intermediate third-grade class also considered each other good friends. Aside from the Dennis-Robert friendship, this was the only reciprocal third-grade friendship to extend across unit lines.

Chris' notions of time were somewhat uncertain. Although, unlike George, Chris could only name 11 months out of order, neither of them knew the length of the school year nor how long they had been in school so far this year. Chris thought that school began in July or June and ended sometime in the summer. Chris was one day behind on the current date. Chris, like George, was uncertain about how long ago Christmas was and how long it was until school would end. Despite saying that the school day began at 9:00 a.m. and ended at 3:00 p.m. (as did Helen and Beverly), he believed there were eight hours in the school day. He could detail his daily schedule but left out storytime. Like George, he did not know how long reading lasted, but there was not enough time for him to go to the IMC during reading period. He could discourse on the previous day's events but not on the following day's or week's. This year was better than the previous because his classroom area was bigger. Like Alex, he did not actually like going to school in the morning, but once he was there it was all right. He just looked forward to having a good day. His favorite time of the day was the afternoon when "specials" occurred. He, like several of the intermediate girls, preferred the beginning of the year before routine set in. He felt he worked at the same speed as his friends.

Primary Third-Grade Girls

Jane

Although Jane, with 3.17 percent, had the highest amount of off-task time among primary third-grade girls, this percentage was below the mean for both intermediate third-grade boys and girls and also primary third-grade boys. If only academic subjects are considered, her off-task time experienced only a marginal increase to 3.57 percent. The subject in which Jane was most off-task, at 6.81 percent, was social studies/science. Her spelling off-task time amounted to 3.84 percent and that for reading was 3.61 percent.

In mathematics she was off-task 2.85 percent of the time. In language arts she was seldom off-task. Jane was quite diligent about completing her work but had to use 18.66 percent of the recess time during which she was observed to finish assignments, mainly in reading. She was absent four days this year and three days the previous year.

Jane's ability level was significantly higher than that of the other primary third-grade girls although it was equal to Dennis'. Her total achievement test score was 64.6 (which was higher than those of four of the intermediate girls). Her IQ score, 118, was only second highest for primary girls. Her mathematics score, 83.7, was the third highest for all third-grade girls and was the highest for all primary third graders. Her science score at 79.7 was also rather high. Her social studies score was 57.5, her spelling was 46.5, and her reading was 41.5. Jane was in the high ability group in her reading class. She was 99 months of age at the beginning of the third grade.

Jane was a very verbal child and quite friendly, especially to adults. She had no close friends in her third-grade class. Despite the fact that she was a very self-directed child and industrious, she did not get on as well with her teacher as some children did. Every slight act of misbehavior received a reprimand, while the same behavior by other children often occurred without comment by the teacher.

Just as Jane's ability to express herself was superior to that of her classmates, her notions of time seemed slightly more well developed than theirs. She knew the months of the year, how long school lasted, what months it began and ended, and how long school had been in session so far that year. She did not, however, know how long it was until the end of the year nor how many hours were in the school day although she had demonstrated that she knew all the facts necessary to calculate the answers. Jane could describe her daily schedule in detail but left out storytime and did not know the actual times for classes other than reading. She would like to have had more time in reading to go to the IMC. She, along with Gary and John, were the only students who organized the specials and then said which days each occurred rather than going through the week day by day and recalling the special for that day. She could talk readily about both the recent and the more distant past and the next day, but not about the next week. She liked afternoons and music most. Despite her high mathematics score, she hated math and found it boring. Jane assumed she worked slower than the people she considered friends.

Rebecca

This child's off-task time amounted to 2.93 percent of her time and fell to 1.87 percent if only academic subjects were included. She was off-task during 4.16 percent of her time in spelling and 4 percent in language arts. In social studies/science her off-task time amounted to 3.48 percent and in mathematics, 1.73. Her lowest amount of off-task behavior, .58 percent, occurred in reading. Rebecca required the third highest amount of recess time among third graders to finish her work. She was inside for 57.33 percent of her recess time; however, she did not use that time well and often spent the greater part of it talking. Part of the reason she fell behind in her work despite her relatively low off-task time was that her number of absences for the year, 18.5, was the highest for all third graders. The previous year she had been absent only twice.

Rebecca was absent during the administration of the achievement tests in September so only her IQ score of 115 was available to suggest her ability level. In addition to being the third grader with the most absences, Rebecca also was the oldest child at 110 months of age in September. She had repeated the second grade. She was especially interested in art and seemed gifted in that area. She was in the same Title I reading class as Sam and was in the middle ability group in her regular reading class.

Rebecca was a talkative child who at times provoked others into talking or misbehaving without herself being caught. This misbehavior became more evident during recess and toward the end of the year. One friend was Kate, but as the year progressed she talked increasingly to Jack. She had little difficulty with her teachers, though, and especially liked her art teacher.

Rebecca's conception of time was hazy. She knew only eight of the months and those were out of order. She had no idea about the length of the school year, or when it began, but believed that it ended in April. Although she knew the current date, she did not know how long she had been in school so far that year. She thought Christmas had occurred four months earlier when it had in fact only been one and a half months previously. Interestingly, she knew the birth year of her older sister but not her own. For her the school day began at 8:00 or 9:00 a.m. and was over by 2:00 p.m., and she did not know how many hours that amount of time included. Her perception of the daily schedule placed mathematics incorrectly in the afternoon, and she left out "specials" entirely although they were her favorite part of the day. Like the boys who had Title I reading, she did not know how long reading lasted. However, she did think that it lasted too long while mathematics was too short. The length of noon recess was another mystery. She could speak about the previous day but was unclear about future events. Rebecca believed that she worked more slowly than her friends.

Alice

Alice's daily off-task behavior amounted to 2.77 percent of her total time and increased to 3.37 percent if only academic subjects were considered. She was off-task 8.06 percent of her time in social studies/science and 4.27 percent in mathematics. Her off-task time in spelling amounted to 2.56 percent, while in reading she had her lowest amount of off-task time at 1.11 percent. Alice used 9.33 percent of her time during recess to finish assignments but generally completed her work in time so that she could have recess outside with her two best friends who generally finished their work as well. She was absent 5.5 days this year and 4.0 days during the previous year.

Alice's ability level was the lowest among third graders if her total achievement score of 8.2 is used as the measure of ability. Her IQ of 92 was also low among these students. Alice scored 58.5 in spelling. She had a score of 15.3 in science, 14.3 in reading, 6.2 in social studies, and 3.1 in mathematics. Alice attended both Title I reading and mathematics. She was in the same three half-hour sessions of this remedial reading each week as were George and Chris, and she had two half-hour sessions of remedial mathematics each week as well. One of these replaced one afternoon's spelling class and another took up storytime and part of mathematics. Alice was 102 months of age but acted in a less mature manner than most third graders.

Alice's friends were all at the low end of the ability scale for primary third-grade girls. This group, which included the other two girls who were in her Title I classes, as well as Helen from time to time, was extremely close-knit. She also had younger friends who were in first grade. Alice seemed unusually dependent on the teacher as the determiner of her behavior. The teachers encouraged her whenever she acted in a manner that was more mature than was usual for her.

Alice's notions of time were essentially unformed. She could name 11 of the months in order but had absolutely no idea when the school year began or ended or how long it lasted. She would not even guess at the current date and did not know in what year she had been born. At the beginning of February, she believed a year had passed since Christmas had occurred. She may, however, have confused years and months as did Stacy in the intermediate third grade. Amazingly, she could accurately provide the times for the beginning of the school day and came quite close to determining its actual length which she believed to be seven hours. Nevertheless, she was completely unable to talk about her daily schedule or the length of any of her classes. The big difference for her between this year and last was the room change. She could relate incidents from the previous day but would not discuss any aspects of the future. Her favorite subject was art. Reading was sometimes too short for her to get all of her work done. She assumed she worked at the same speed as her friends.

Martha

Martha's off-task time accounted for 2.4 percent of her total time daily. This percentage rose to 2.7 percent if only academic subjects were considered. Her off-task time in spelling amounted to 12.5 percent of her time in that subject, but she had no off-task time in mathematics or language arts. Her percentage of off-task time in reading was 1.77 percent and in social studies/ science, 1.42 percent. She rarely had to stay in from recess to complete assignments. Martha assumed that the amount of time allotted for a class by the teacher was exactly the amount required to complete the assignment and so she expected the assignment to fill up the class period. When she finished her tasks, she often spent the rest of the period rechecking her work because she assumed that if she used less than the time allotted, she must have made some errors. Martha missed five days of school this year and two days the previous year.

With a total achievement test score of 31.4, her ability level was similar to that of Helen, Dan, and Ralph although her 114 IQ score was noticeably higher than theirs. Her social studies score was her highest at 68.6, and the next highest was mathematics at 61.6, followed by science at 50.5. Although her reading score of 9.2 was the lowest of all third-grade girls, she was not in a Title I reading class and was in the middle ability group in her reading class. Her 7.2 spelling score was, along with Billy's, the lowest among third graders. Martha was 103 months of age at the beginning of the year.

Martha had no close friends among primary third-grade girls but was generally included in their activities. She regarded Laura in the intermediate unit third grade as a friend. She was a rather determined, energetic child and expressed herself in a very forthright and definite manner. She seemed to get on well with her teachers, whom she was quick to obey.

Martha's notions of time were somewhat vague despite her seemingly organized manner. She could name only eight months in order. She thought the school year lasted eight months as well and that it began in October and ended sometime after May. She considerably underestimated the amount of time she had been in school that year because in late April she thought she had only been in school five months. Martha also underestimated the number of months since Christmas as being three. On the other hand, she overestimated the length of the school day as being eight hours long, but that amount of time was not so far off considering her belief that school lasted until 3:45 p.m., which was the time she arrived at home. In describing her day she left out storytime and "specials" even though the latter was her favorite part of the day. She could talk about the recent past and the next day. She could not imagine a school day being different from what it was currently. Martha preferred the mornings when she felt more awake. Her work speed she believed was the same as her friends.

Kate

Kate's daily off-task time of 2.31 percent was almost exactly at the mean of 2.32 percent for primary third-grade girls. If only academic subjects were considered, her off-task time rose slightly to 2.73 percent. In spelling her 16.66 percent of off-task time was the highest among primary third-grade girls. On the other hand, in social studies/science she had 3.44 percent off-task time, in language arts 2.43 percent, in reading 1.28 percent, and in mathematics only .91 percent. Despite her low off-task time in most subjects she still needed to use 40 percent of her recess time to finish her work. Unlike most other primary third graders, Kate was seldom off-task during this recess work time. Her absence rate of 9.5 days this year was close to that of the previous year's 10.5 days, but provided only a partial explanation of why she had to work during many recesses.

Kate's ability level, according to her total achievement test score of 36.4, was comparable to those of Eddy and Jenny, the most off-task girls in the intermediate third grade. Her IQ of 121 was highest among primary third-grade girls and third highest for all primary third graders. Her highest achievement scores, 57.5 and 52.5, were in reading and mathematics, respectively. Her spelling score was 34.4, her science score 23.4, and her social studies score 10.2. Kate was in the high-ability group in reading. Her age at the beginning of the school year was 97 months. She had a mutual friendship with one of the girls in Title I reading and with Rebecca. She was not talkative and had minimal contact with teachers.

Her grasp of time was surprisingly weak. Although Kate knew the names of the months of the year, she did not know the length of the school year or when it ended. She knew it had begun in August but had no idea how many months had passed since then. She was behind by one day in giving the current date. Although she did not know the year in which she was born when asked, she proceeded to calculate it but without consideration for parts of a year and so was slightly wrong. Kate knew correctly how long ago Christmas occurred. Her estimation of the length of the school day as seven hours was very close to the actual amount of time. Kate was very unclear about her daily schedule and knew none of the class times. She could talk about the previous day but not about the future day. She thought Valentine's Day occurred the following week when in fact it was only three days away and within the week she was currently in. Mathematics, where she exhibited the least off-task behavior, was Kate's favorite part of the day while she did not like science which was too long and boring. She thought that she worked more slowly than her friends and did not feel she had enough time to complete her assignments.

Helen

Helen's percentage of daily off-task time amounted to 1.55 percent. If only academic subjects were included, then she was off-task 1.71 percent of the time. Her highest percentage of off-task time occurred in spelling with 12.5 percent. Her off-task time in other subjects was minimal with 1.29 percent in social studies, 1.19 percent in reading, and 1.08 percent in mathematics. In language arts she had none at all. Helen used 16 percent of her recess time to finish her work. She usually did this immediately and then still had time to go out if she did not have to wait to show it to the teacher. This year she missed 5.5 days and the previous year only 1.0 day.

Helen's ability level, according to her total achievement test score of 31.4, was similar to Martha's, Dan's, and Ralph's. Her IQ score was 101. Like Martha and Dan, Helen's highest percentage of off-task time for a subject occurred in spelling in which she had an achievement test score of 39.4. Her highest score was 79.7 in science. In reading she had 50.5 and in mathematics 28.4. Her lowest score was 6.2 in social studies. Her age at the beginning of the third grade was 108 months. Helen had not failed a grade but started school a year later than she was eligible to enter. She, like the older Rebecca, was especially interested in art but to a less pronounced degree.

Helen got on well with the other children but considered Rebecca and Alice to be especially good friends. She was well liked by her teachers.

Her grasp of time was not well developed. She knew only eight months of the year and those were out of order and did not include her birth month. Only Ralph made that same omission. She did not know the number of months in the school year but did realize it began around September and ended in April or May. Despite this knowledge, she concluded that at the beginning of March, she had only been in school five months. Like Ralph, she did not know the year in which she was born. Helen believed the school day began at 9:00 a.m. and ended at 3:00 p.m. but did not know the number of hours in the school day. She left out storytime and the "specials" in describing her daily schedule. She incorrectly believed reading, her favorite part of the day, lasted one hour and was uncertain about other classes. She could not talk about the previous day but thought the next day would be just like the current one. Aside from that, she would make no predictions of future events. Mornings went fast because of what she perceived as "the short things" that occurred then. Helen felt she worked at the same speed as her friends.

Beverly

Beverly had the least amount of off-task activity among primary girls, but she was only second lowest (after Stacy in the intermediate unit) for all third-grade girls. Her off-task behavior accounted for 1.44 percent of her time in class but was only 1.3 percent for academic subjects only. The one class in which Beverly was noticeably off-task was reading, where she was off-task 3.57 percent of her time. Like her close friend from Title I mathematics, she rarely needed to stay in during recess to finish her work.

During the current year Beverly was absent nine days and had been absent six days the previous year.

In ability level she tied at 15.3 with Stacy for the third lowest total achievement test score among all third graders. Her reading score was her highest at 34.4 and she was in the high-ability reading group in her class. Her spelling score was 17.3. In mathematics she had a score of 15.3. She attended two half-hour sessions each week of Title I mathematics which caused her to miss storytime and part of mathematics on those two days. Her science score was 6.2, and for social studies it was 3.1. Beverly was 104.5 months of age in September. Her December birthday had caused her to be older than many third graders.

Her friends were the two girls, including Alice, who attended Title I mathematics with her. They were of similar ability levels. Beverly's contact with her teachers was minimal as she was far more interested in the activities of her friends. Her group of friends seemed to get on well together almost all of the time.

Beverly's notions of time were somewhat better developed than those of her friend Alice. Beverly knew the months of the year but not how many were in the school year which she thought began in July and ended in August. She correctly knew that two months had passed since Christmas. Like Helen, Beverly thought the school day began at 9:00 a.m. and ended at 3:00 p.m., but she concluded that she was in school eight hours a day. She, like Alice, was completely unable to describe her daily schedule. Beverly thought reading, her favorite subject, lasted only one hour. She had some idea of recent past events and of the next day's activities. Despite the fact that recesses were the significant portion of the day for her, she did not ever feel bored in school. She would, however, shorten mathematics (in which she spent more time than did other primary third graders because of her additional Title I mathematics time). Beverly was the only third grader to claim she never had any homework. She assumed that her work speed was the same as that of her friends.

CHAPTER V

SUMMARY AND IMPLICATIONS OF FINDINGS

This chapter begins with a brief overview of the study. It is followed by a summary of the findings and their practical implications as well as a discussion of the findings of previous related research. The implications for future research are also discussed. A brief final statement concludes the chapter.

Overview of the Study

This study was designed to examine how third graders used their school time, both in the course of a school day and a school year, and why they used it as they did. An ethnographic case study of third graders in one Wisconsin IGE elementary school currently involved in the Wisconsin Research and Development Center's Resource Utilization Project was the methodology chosen for the research. The research further sought to determine individual variations in the use of school time and such factors as personal characteristics and the child's perception of time spent in school which might be linked to these variations.

Findings

Formal Administrative and Faculty Constraints on Scheduling of Student Time

Decisions regarding time allocation were made at three levels: district, school/unit, and classroom. The district administration determined that the primary unit's school day would conclude earlier than that of the intermediate unit. Therefore, the primary unit third graders had a school day consisting of 6 hours 35 minutes and the higher ability intermediate unit third graders had a school day of 6 hours 50 minutes.

It was at the school level that subject time allocations and student schedules for the week and the day were determined. Both the school principal and the teachers in each unit were involved in these decisions which resulted in schedules which were similar for students who were in the same unit but different from those who were in another unit. Subjects offered, daily order of occurrence of subjects, and the allocation of time to specific instructional and noninstructional activities varied between the primary and intermediate units. Nevertheless, despite the difference in the length of school day for the two units, noninstructional time in both their weekly schedules accounted for slightly less than one-third of the total time in the school week.

Of particular importance is the difference in scheduled minutes for reading and mathematics in the two units. Primary unit third graders were allocated 330 minutes of reading class time each week in contrast to the intermediate unit's allocation of 390 minutes for the same subject. The primary unit also received fewer scheduled minutes of mathematics instruction per week at 240 minutes in contrast to the intermediate unit's 270 minutes per week. The lowest ability third graders in the primary unit who participated in Title I reading programs did, however, receive more minutes in reading and fewer minutes in mathematics than did other primary unit third graders.

The individual teachers determined how the actual class instruction in a particular subject would be organized. Findings related to faculty control over scheduling student time will be mentioned in the next section.

Discussion

Related research. Foshay's (1973) view that the organization of school time is not linked to curricular decisions but to traditional practices was borne out by this research, for much of the organization and development of students' daily, weekly, and yearly schedules was determined arbitrarily. Jackson and Stuteville's (1968) conclusion that less time was devoted to science in the lower elementary grades than in the upper or intermediate elementary grades was supported by these findings. Also, the primary unit third graders had less mathematics time than Jarvis (1963) thought was necessary for achievement gain while the intermediate unit third graders had sufficient time for mathematics according to his recommendations.

Practical implications. There are several implications of these findings for administrative practice. In the IGE approach it is important for teachers to have joint planning time. However, there are at least two difficulties which arise in following a time schedule in which there must be congruence among all classes in the unit. First, the provision of time for creativity can be neglected; and second, flexibility in shortening or lengthening classes to match needs of the particular daily lessons disappears. On the other hand, a fixed routine facilitates smooth operation of the school and may contribute to a feeling of security on the part of some third graders.

It is noteworthy that noninstructional activities accounted for almost one-third of the school day. If these activities are essential, it may be that the school day must be as long as it is to provide students the opportunity for the amount of development and practice of skills that they currently enjoy.

The teachers and the administration must be knowledgeable about the amount of time actually needed for the development of particular skills so that they can allocate appropriate amounts of time for each subject. Providing low-ability students with a shorter school day and less time in mathematics and reading than higher ability students has no obvious theoretical basis, especially since those low-ability students are the same ones who complain of not having enough time to complete all their assigned work.

The potential advantage of Title I remedial reading and mathematics programs which some students receive does not arise because these students are receiving more time in those subjects. Actually, they do not receive more time. The potential benefit is from the one-to-one or small-group instructional techniques which can be used in these classes and which would not have been used for these children if they had stayed in their regular classroom for that amount of time.

Research implications. As Bloom (1974) and Thomas (1977) have indicated, it is important that future research attempt to determine how much time is actually necessary for students of particular age groups and ability groups to master specific knowledge or skills. There are no definitive or satisfactory theoretical answers to this question as yet. Another area for research is the effect of a rigid schedule on students' creativity in comparison with the effect of a more flexible schedule on their creativity.

Actual Use and Control of Student Time by Administration and Faculty

There was no "typical" day at this school; not only did the days within a week vary, they also varied from week to week. Simply because a certain amount of time was scheduled for a subject did not mean that amount of time would be provided each time the subject was scheduled. Both the order and the amount of time per subject could be changed by the school principal or faculty. The variations in time actually allotted a subject each day were less extreme when averaged. Thus, over time, students did tend to receive more nearly the total amount of time scheduled for a subject than might be assumed if one observed a class only for a single day. Both teachers and the principal contributed to the unpredictable and momentary daily events which created further deviations from the official schedule.

In a comparison of the percentage of actual to scheduled time for each subject area, it was found that most students received at least 80 percent of the scheduled instructional time in each subject. Primary unit social studies/science was a notable exception at 64.4 percent. Primary third graders received more than their scheduled amount of reading time, but they received only approximately 82 percent of scheduled mathematics time unless they also has Title I mathematics. Having extra time in Title I mathematics created the illusion that these students were receiving the total amount of time allocated for mathematics, but this occurred only when they were compared to non-Title I primary unit third graders. Title I students still did not receive the total amount of mathematics time scheduled for them. The intermediate unit received approximately 85 percent of its scheduled minutes in reading and about 90 percent of its scheduled minutes in mathematics.

Not only did teachers affect the allocation of time per subject, but they also determined to a large extent how students would use their time during a class period. It was they who determined how much time the student would spent working independently, one-to-one, in small groups, in large groups, working with other students, or in process behavior.

In a comparison of the occurrence of these instructional and noninstructional behaviors for all subjects and all third graders, the largest percentages of time were spent in independent work (31.6%) and in large-group instruction (30.19%). The next most frequent category was noninstructional behavior, which accounted for 24.96 percent of students' classroom time. Of this percentage, 20.31 percent resulted from process behavior and 4.65 percent from off-task behavior. The other behavioral categories occurred minimally in comparison with these major uses of student time.

The use of time in individual subjects did not mirror the percentages compiled for all subjects. Some subjects were more heavily involved in one type of instructional behavior than in another, although the academic subjects did show the greatest variety in categories of behavior. Reading (including Title I, storytime, and free reading) instruction involved 41.01 percent of independent work, which was almost four times as great as the percentage of reading time spent in large-group instruction. Small-group instruction in reading, at 22.15 percent, was used more extensively in that subject than in any other subject. The second highest percentage of independent work time, 35.96 percent, occurred in mathematics (including Title I). For language arts, the percentages for independent work (33.92%) and large-group instruction (27.92%) were much more similar than they were for reading. For social studies/science, large-group instruction (57.3%) was used almost three times as often as independent work. The less frequently occurring categories (one-to-one instruction, small-group instruction, and students working together) varied in their percentages according to the subject in which they occurred.

The lowest percentages of process behavior occurred in reading (16.64%), where the largest percentage of the time was spent in independent work and in social studies/science (16.95%), where the largest percentage of the time was spent in large-group instruction. The largest percentage (24.51%) of process behavior occurred in mathematics.

As for special subjects, independent work dominated only in art, while large-group instruction took up the majority of class time in music and library/guidance and received a plurality of time in physical education. Only slightly more process behavior occurred in special subjects (21.95%) taken as a whole than in academic subjects (19.99%) taken as a whole.

Both academic subjects and special subjects had approximately the same proportions of instructional time and noninstructional time. The individual subject areas deviated only slightly from the general tendency for three-fourths of the class time to have been devoted to instructional activities and one-fourth to have been devoted to noninstructional activities.

When primary and intermediate third graders were compared according to how their time was spent in each subject area, some variations from the general picture emerged. There was a difference in the amount of time devoted to large-group instruction in both academic and special subjects. The primary unit students spent 35.14 percent of their time in all subjects in large-group instruction; the intermediate unit students spent 27.27 percent. On the other hand, independent work was used slightly more extensively in the intermediate unit for all subject areas except social studies/science.

On the whole, process behavior occurred in about the same proportion in the intermediate unit (20.79%) as in the primary unit (19.50%). However, process behavior in special subjects occurred slightly less often for primary third graders (17.54%) than for intermediate third graders (24.66%), who attended these subjects in larger classes. For academic subjects, process behavior occurred most frequently in language arts (25.03%) for the intermediate unit and in mathematics (27.15%) for the primary unit. This behavior occurred least often in reading (14.71%) in the intermediate unit and in social studies/science (14.99%) in the primary unit.

Although students in both units spent relatively small amounts of time in small-group instruction, the intermediate unit students spent slightly more time (8.36%) in small groups than did the primary unit students (5.6%). In both units most of the small-group instruction occurred in reading. In the primary unit 16.49 percent of the time devoted to reading was spent in small-group instruction, while in the intermediate unit 25.86 percent of the reading time was spent in that instructional mode. For the three reading classes, there was no definite pattern in the percentages of class time the teacher allotted to particular ability groups for small-group instruction. However, in all three classes the lower ability groups almost always met first--largely because of the need to accommodate the Title I schedule. In the primary class, the low and middle ability groups met for a larger amount of time and more frequently than did the high ability group. In the intermediate unit low class, the high and low groups met for similar amounts of time except when a student teacher was present. When she was present, the low ability group, with its fourth-grade students who had to leave for Title I reading, terminated at the usual time but the high ability group (with no Title I students) was able to meet for a longer period. All third-grade students in the intermediate unit's low reading class, however, tended to receive more small-group instruction than did those in the other two classes (excluding Title I third graders). In the high ability class, the high group received slightly more group instruction than the low group. Additional minutes spent in reading tended to result in more small-group instruction only for the intermediate unit's low-ability reading class, and then only if an additional adult was present to help.

Process behavior in reading was most pronounced among primary girls, who tended to stand in line longer and more often to show their reading workbooks to the teacher. For mathematics, there was a high correlation between the occurrence of process behavior and the number of minutes spent in mathematics class for intermediate girls.

Teachers exhibited their control over student time in several ways. Students were rarely told how much time they would be given to complete a task. When they were told, it was usually only during the last part of an activity, and even then the teacher might or might not adhere to the number of minutes she had stated. When students inquired about time limits, the usual reply was that they would have "enough" time to do the assignment. Teachers also rearranged the daily schedule and might or might not inform students of the changed agenda for the day. Furthermore, teachers could dole out minutes as a reward or take away or threaten to take away minutes as a punishment, especially those minutes immediately before and during recess. Even when a child completed the assignment for the class period, the teacher still retained control over the remaining time in the class by permitting certain activities and prohibiting others during that time. Teachers further attempted to control the students' use of nonschool time through homework assignments.

Discussion

Related research. Aside from the previous research of Gump (1967) and Grannis (1978) indicating that at least 9 to 13 percent of students' time was used for noninstructional activities by elementary classroom teachers, little work on administrative and teacher use and control of student time within individual schools has been reported. Approximately 20 percent of students' class time in this school was used in process behavior. This was greater than the accounts reported by earlier researchers.

Practical implications. The implications of these findings for practice are varied. When comparison is made between the scheduled amounts of time per subject and actual amounts of time per subject, it was evident that there is no "typical" day for third graders in this school. Despite the existence of a formal schedule, the schedule was not followed rigidly. Regardless of administrative and faculty decisions concerning how much time was to be allotted to each subject, the individual teacher still had final control over whether this decision would be carried out. However, the teacher in an IGE instructional unit may have less freedom in organizing of the students' day and week than do teachers in self-contained classrooms.

Low-ability third graders received fewer minutes in social studies/science than other third graders. It would be easy to correct this situation by simply adhering to the official schedule. However, to eradicate the difference in number of minutes in mathematics between the two units would require a change in the schedule. The fact that the primary and intermediate unit third graders were both receiving the same number of minutes in reading--despite the fact that the intermediate unit was scheduled to have more--indicates that perhaps those additional minutes are viewed as either unnecessary or undesirable by teachers and students in the intermediate unit.

Since it was found that three-fourths of the actual time in class was spent in instruction, the individual teacher who decides which techniques and procedures will actually be used in developing skills in students retains a great deal of control over the learning opportunities provided to individual students. Teachers themselves need to be constantly aware of how vital their role in instruction actually is. Teachers should also be aware of the variety of instructional techniques that can be used and of the amount of time they spend in using each of the techniques. It is not easy for teachers to rearrange the daily or weekly schedule of the school, but they can eliminate an element of routine in students' schedules by varying their instructional techniques within classes.

Teachers also have considerable control over the amount of process behavior going on in their classes and could put that time to other uses. The number of students waiting in line might be restricted. Also the teacher, rather than the student, could move about the classroom.

It is important that teachers who teach the same grade, but who are not in the same unit, have the opportunity to plan together and attempt to coordinate their instructional techniques. Instructional techniques should be chosen in accordance with ability level of the student. In this study it was found that large-group instruction was used more frequently with lower ability students than with higher ability students (even though the low ability class was smaller in size). Conversely, the upper ability class received more small-group instruction although the size of the groups was slightly larger than those used in the primary third grade.

The manner in which teachers control the use of student time appears to encourage dependency, rather than responsibility, on the part of students. If children are to be judged and graded according to whether they finish their work on time, they need to have more opportunity to practice exercising control of their time. It is debatable whether the confusion on the part of students resulting from inconsistency in the teachers' provision of knowledge about time is justifiable in the management of any group of individuals, even if they are children.

The advantage of having another adult in the class, especially in reading, was evident from the findings of this study. The presence of an additional adult--whether an aide, a volunteer mother or a student teacher--increased the amount of one-to-one or small-group instruction for students. Principals could actively recruit volunteer parents or grandparents who might be interested in helping out in the school and having an opportunity to see what is going on there.

Research implications. If teachers are to choose instructional techniques appropriate to the particular ability level of a student, they must know which techniques are most effective for use with students of each ability level. Research is needed to provide a basis for making these decisions. It is also important to determine whether or not children of differing ability levels need differing amounts of instruction in specific subjects and, if so, to determine the best ways to organize a school to provide for these differences. Comparative studies of the amount of process behavior in IGE and non-IGE elementary schools might reveal whether a student in an IGE school loses more time daily to process behavior because of moving to new classes for different subjects than does a student in a conventionally organized school.

Actual Use and Control of Student Time by Students

There are only two ways in which a third grader could control the allotted time during the school day. The student exercised this control through either engaging in off-task behavior or through absence. Off-task behavior occurred in every subject area and in conjunction with all six of the teacher-controlled student behaviors. The mean percentage of off-task time (including recess work time) per day for third graders was relatively low at 4.69 percent. Primary girls had the lowest mean at 2.32 percent while those for primary boys, intermediate boys, and intermediate girls were fairly close to one another at 5.05 percent, 5.21 percent, and 5.71 percent, respectively.

The highest percentages of off-task time in subject areas occurred in language arts (6.36%), reading (5.19%), and art (5.08%) while the lowest was in physical education (.39%). A higher percentage of off-task time occurred in the academic subjects than in the special subjects. Students in the intermediate unit were slightly more off-task for all subjects than were those in the primary unit. Generally boys were slightly more off-task than girls, although in the intermediate unit the girls were a bit more off-task in the academic subjects than were the boys.

The length of academic classes did not seem to have any marked effect on the amount of off-task time. The only exception was primary girls, for whom off-task time tended to increase as the minutes in academic classes increased.

Total achievement test scores and the percentage of time off-task in either all subjects or only academic subjects (including recess work time) showed little correlation for these third-grade students. Only for primary boys was there a high positive correlation (.731) between S.A.T. reading scores and the percentage of off-task time in reading. This same group of third graders was the only one for which there was a high positive correlation (.620) between S.A.T. reading scores and the percentage of off-task time in all language arts and a high positive correlation (.824) between S.A.T. spelling scores and the percentage of time off-task in spelling. No group of third graders showed significant correlation between mathematics achievement test scores and percentage of off-task time in mathematics or between social studies and science test scores and the percentages of off-task behavior in those two subjects.

There was little relationship between IQ scores and off-task time in either all subjects or only academic subjects. Interestingly, the IQ scores showed a considerably lower correlation with achievement scores for boys than for girls.

Chronological age as a predictor of off-task time was somewhat more useful than the three factors mentioned previously as possible predictors of off-task behavior. The correlations between age and percentage of off-task behavior were uniformly negative, although only intermediate girls showed a significant negative correlation. This suggests that the younger, less mature girls (who were perhaps misplaced in terms of ability level in the intermediate unit) were the ones with relatively high percentages of off-task time in both academic and special subjects. On the whole, there was only a slight tendency for older third graders to engage in less off-task behavior than younger third graders.

There was little relationship between the number of days of absence and off-task behavior. Both primary and intermediate students were absent approximately seven days during the year of this study. Only the intermediate third graders, however, showed similar annual patterns in their individual absence rates over the past two years.

There was only slight correlation between absence and chronological age. Furthermore, there was little correlation between absence and either achievement test scores or IQ scores.

Discussion

Related research. The findings of this study differ from those reported in much of the previous research on student use of time. Neither Lahaderne's (1967) conclusion that IQ and achievement scores correlated positively with on-task time nor Anderson's (1973) report that high-ability students spent more class time engaged in learning than did low-ability students was supported by these findings. Good and Beckerman's (1978) conclusion that off-task behavior was more likely to increase in conjunction with large-group instruction and to decrease in conjunction with small-group instruction was not borne out in this study. Furthermore, their hypothesis that off-task time is a reward that low-ability students give themselves was not supported by these findings.

Practical implications. On the whole, these findings do not clearly indicate direct causes or explanations for differences in amounts of off-task time among third graders. The percentage of off-task time does seem, though, to be linked to the degree of involvement required of students in the ongoing instruction in a class. Well-structured large-group instruction does appear to be linked to a reduction in off-task behavior among third graders. However, it is questionable whether a reduction of off-task time (which was not large) is so desirable that authoritarianism on the part of the classroom teacher should be increased.

Chronological age seems to be related to off-task time in that older third graders tended to have less off-task time. Yet it is important to note that the possible explanation for why there is a link between chronological age and off-task time may differ for primary and intermediate third graders. The older students in the intermediate unit may be more mature and therefore less likely to be off-task. The older students in the primary unit may simply work slowly; their slowness may have caused them to fail a grade previously and they may continue to need more time to finish an assignment. It should be noted, however, that a link between ability level and slowness in completing work was not demonstrated in this study.

Achievement does not seem to be a useful predictor of either the amount of daily off-task time or absence from school for third graders. The differing patterns in annual attendance between students of various ability levels, however, may deserve administrative scrutiny. The administration and faculty may need to devise methods to encourage better attendance among lower ability students in order to maintain their progress in skill acquisition, whereas absences among higher ability students may not require as much administrative concern or inquiry.

There was little opportunity in the school day for students to control totally their own use of time except perhaps in a negative way, i.e., by refusing or neglecting to do the work assigned. There was little freedom at this grade level for students to pursue their own interests or to be encouraged to develop interests. Teachers should consider whether this situation is an effective way to promote achievement and the motivation to achieve.

Since little connection was found between the amount of off-task behavior and the 15-minute difference in the length of reading and mathematics classes in the two units, length of class was not found to be a major factor in designing the schedule to purposely reduce off-task behavior. Nevertheless, the length of a class is a factor to consider in determining the appropriate amount of time to be allocated for learning certain skills in a specific subject. Time of day also had little apparent effect on increasing or decreasing off-task behavior in a subject. Therefore, one need not be overly concerned about this variable in determining students' schedules, at least insofar as time on-task is concerned.

The amount of off-task behavior among very high ability children who finish their assignments and then have nothing else to do should be considered carefully by administration and faculty. Some specific provision should be made for these students' needs. Similarly, there was no particular incentive to finish one's work before the period is up and, consequently, some students may have been taking longer than necessary to finish their work.

Research implications. The percentage of off-task behavior was quite small for these third graders. One may question both whether there is a maximum desirable percentage of off-task time and whether there is a minimum desirable amount to avoid turning schools into penal institutions. It is important to determine at what point the amount of off-task behavior actually provides an atmosphere detrimental to learning rather than providing an atmosphere conducive to learning. Future research might also probe what type of instruction is most likely to create off-task behavior if it is considered desirable to either reduce or increase the amount of such behavior.

Whether there are other factors that are likely to increase off-task behavior and absence on the part of students is unclear from these findings and further research is required to answer this question. The question can also be approached from the viewpoint of factors that are likely to reduce off-task behavior. It seems, though, that the answer is extremely individualistic, at least for this group of third graders.

Although this research did not indicate that a longer class period increases off-task time, it must be remembered that this research involved two different ability groups of students in two separate classes. It might be useful in future research to divide similar ability level students into two classes, each with a different amount of time allotted for a particular subject, to determine whether or not class length affects the amount of off-task behavior.

Actual Use and Control of Student Time by Students and/or Administration and Faculty

There were two portions of the day during which student time usage might be controlled by either adults or students. Generally, circumstances determined who decided how a student's time was used during recess and during "free" time.

For various reasons, not all students were able to participate in outside recess each day. For example, all the students might be kept inside for all or some of the recess periods on days with bad weather and, although inside recess was still essentially student-controlled time, it had different uses from outside recess. On other occasions, students lost the privilege of having morning or afternoon recess if they were behind in their work in academic subjects or if disciplinary action was imposed. The morning and afternoon recess periods invariably lasted longer than the scheduled 15 minutes so the class following recess was cut short.

The percentages of recess time third graders spent inside working ranged from none to 77.33 percent. Primary third graders had to forego recess to finish their work almost five times more often than did intermediate third graders. Primary third-grade boys stayed in most frequently while intermediate boys used only about one-seventh of the time needed by primary boys. A comparison of the mean for the intermediate third graders with the mean for primary third graders revealed a difference of 10 percent in the amount of recess time required to finish their work. However, in each unit and for each sex there were individuals who did not need extra time to complete their work.

The correlation between percentage of recess time spent working and achievement test scores was significant only for primary boys. The negative correlation suggested that boys with lower achievement test scores tended to spend more time working inside during recess.

For all third graders, the amount of off-task behavior in class bore little relation to the amount of recess time needed to finish assignments. Those students who needed recess time to finish work usually were slower workers for whom the time allocated for a particular subject was insufficient even though they were on-task most of the time.

The correlation between the number of days absent and amount of recess time spent working was significant and positive for primary third graders but not for intermediate third graders. The students who had to remain inside during recess periods in the intermediate unit were rarely those who had been absent.

As for "free" time, the remaining portion of the day that either adults or students might control, it was questionable just how free that time actually was. Having "free" time generally meant that a student had an opportunity to participate in a teacher-designed activity which was optional and for which no grade was given unless for extra credit. Only students who worked rapidly received this type of free time. Another variation of "free" time could best be described as time used to complete other assignments, either in the same subject or in a different subject, when the student had finished the current assignment.

The first type of free time occurred in both mathematics and reading in both units. However, the greater variety of possibilities for spending free time were available in the primary third grade than in the intermediate. Students in the primary unit were also those most likely to have free time.

The second type of free time (which was really catch-up time) could displace any of the first type of free time activities. Occasionally, there was an overlap between catch-up time and actual free time so that the two could occur simultaneously in the same class but for different children. When the entire class was given catch-up time, there were always some students who did not need it, so that bit of time automatically became free time for them.

Discussion

Related research. There was no specific reference in the literature to student time that is controlled jointly by the adults in the school and by the students. Worthy of note, though, is Bloom's (1974) conclusion that educators should regard the completion of school assignments as more a matter of sufficient time than ability of the students. The results of this study suggest that a student's achievement level in school is directly linked to being a slow or fast worker. Children in the primary third grade did try to finish their work, but some simply needed more time than was allotted in their schedule.

Practical implications. This last fact has practical implications in the schools. If many students are not finishing the assignment in the allotted time and yet have not been off-task, then either more time needs to be allotted to the subject or the assignments need to be reduced in length for at least some (if not all) students.

If primary third-grade students must use a great deal of recess time to finish work, then perhaps they should have a longer school day--or at least have a day as long as that of the intermediate third graders. It is important to consider what effect their shorter school day may have had on primary third graders' learning opportunities in comparison to those of intermediate third graders when both groups are in the intermediate unit for fourth grade. Will the differentiation in the time allocated at the third grade level have a noticeable effect on students' later performance and their own expectations about their performance in later grades? This question has important practical as well as research implications.

The fact that there was variance in the use made of recess time by students suggests that a "breather" in the middle of the morning or afternoon is a very necessary portion of the schedule and, in itself, reflects an allowance for individualization in working pace among third graders. The availability of recess time permits flexibility in the schedule for slower workers whether or not that was the original intent.

The use of recess as a catch-up time does mean, though, that a teacher must be on hand to supervise and even help the students. This reduces the teacher's own free time and/or planning time.

If the free time provided by recess is important for the development of friendships and other social relationships among children, and if some children are not receiving those opportunities because they are slow workers, they obviously are being deprived of the socialization experiences that other students receive. Administrators and teachers should consider carefully alternative arrangements which will enable all children to have an opportunity to cultivate friendships in order to make their total school experience more enjoyable and more positive.

There is a contradiction in the fact that more free time activities were available for primary third graders, many of whom actually never had free time. Some students never had the experience of engaging in the free time "fun activities." On the other hand, in the intermediate third grade high-ability students sometimes had nothing special to do when they finished their work before the end of the class period although they did invariably finish their work early. They could benefit from exploratory types of free time activities. It must be recognized, though, that teachers must have adequate planning time if they are to provide such activities for the faster workers. Simply providing intermediate third graders more freedom to go to the IMC would be one approach to this situation, especially since intermediate third graders themselves expressed a desire for additional time in the IMC.

A final practical implication of this study is that average- to high-ability students who are absent apparently have little difficulty making up missed work. This suggests that the actual daily amount of instruction given this group of students may be less than they are capable of handling as individuals.

Research implications. Additional research to identify the reasons why slow workers are slow could be beneficial educationally, especially if effective procedures to help them work more quickly could be developed as a result of such research findings.

Student Perception of Blocks of School Time and Control of School Time

The order and names of months are not yet firmly fixed in childrens' minds in the third grade. Slightly over half of the third graders in this study were able to name the 12 months of the year in order of occurrence. Intermediate unit third graders were better at this task than were primary unit third graders, and third-grade girls were better at this than were third-grade boys. The children did not attach any particular importance to knowing the months of the year; this bit of knowledge had no greater priority for them than any other aspect of school learning.

These third graders also did not yet have a firm grasp of the length of the school year, but those who were willing to guess said between 8 and 10 months. The perceived differences between the current year and the previous year were based on the increased difficulty of the work rather than differences in the teachers or in the length or order of the daily schedule. Third graders did have a fairly clear idea about the months in which school began and ended. The intermediate third graders were more accurate than the primary third graders at estimating the number of months that they had been in school. Generally the students thought of the time in school as being marked off in months. The favorite parts of the school year for third graders were times when the routine schedule was somehow disrupted but not rearranged.

In perceiving the school year, it was much easier for students to correctly estimate how many months ago Christmas had occurred than to predict how many months it would be until the end of school--even when the two events were equidistant from the current moment. Only the higher ability students would attempt to calculate the number of months until the end of school. Thinking ahead further than the current school year was not a natural phenomenon for most third graders.

Third graders were aware of the present time, even if they could not relate it to past or future time. Most third graders knew the current date. Those few who made occasional errors usually gave the date of the previous day. The few students who did not know the current date were among the lowest in ability level.

The one date all third graders knew correctly was the day and month of their own birthday. This was a fact and could be remembered rather than calculated.

Although the schedule for each school week was perceived as being the same, weeks themselves were not regarded as the same by third graders. However, the way in which weeks were distinguished from each other was a fairly individual matter. Despite the students' claim that weeks could be differentiated from one another, they invariably found the previous week to be almost indistinguishable from the current one. As for the upcoming week, it was an unknown entity and third graders would rarely guess what it would be like. Third graders were more willing to describe the next day than the next week. Any differences cited between the current day and the next were presented optimistically as things which tomorrow would have and that today did not have. Despite the fact that intermediate boys were the most accurate and the most confident in predicting the next day's events, they--unlike girls and primary boys--found it impossible to describe the previous day.

The third graders' perception of their school day had numerous aspects. There was quite a difference in the ability of intermediate and primary third graders to describe the basic daily schedule. Both boys and girls in the primary third grade had a hard time with this task but the intermediate unit students had no problem. Nevertheless, only the highest ability third graders were able to describe accurately both the order of classes in their daily schedule and the time at which each class began and ended. Students had no difficulty recalling on which days of the week they had special subjects--art, music, and physical education--and Friday was definitely the favorite day of the week for third graders.

Most students had a functional knowledge of their class schedule and knew what subject came next after each class, even though they might not be able to recite their entire daily schedule at once. It took most students about two weeks at the beginning of the school year to memorize this order. Those children who did not have especially strong relationships with other children, however, had less confidence in their ability to know what activity was going to occur next. They were the ones who were most dependent on cues from the teacher to know where to go next.

Although most third graders could not tell the clock times when specific classes began and ended, they were aware of how long classes were relative to other classes. Surprisingly, although lunch and noon recess was eagerly awaited by students, not all students knew how long the lunch period actually lasted. Reading was the longest class for both units, and most students perceived it to be the longest. Determining the shortest class was more difficult for them, however, since several short classes were similar in length. Accurately differentiating between amounts of time which differed only by a few minutes was almost impossible for third graders. The students' perception of the shortest class was closely aligned with the one they thought was the fastest.

Few students felt that any class lasted too long. In fact, students were more interested in the possibility of lengthening short classes than in shortening long classes. In both units the lowest ability students wanted more time in which to finish mathematics.

The length of the school day tended to be estimated correctly most often by the intermediate third graders but not by the highest ability boys, for they thought the day was shorter than it actually was. In both units, students who seemed to have trouble completing their work thought that the school day was either much longer or much shorter than it actually was. Third graders were more aware of the time the school day ended than when it began. The determination of when the day began depended upon whether the child considered school to start at the moment of arrival on the playground or upon entrance to the school building. The boys were more likely to think that school started slightly earlier than it actually did because they tended to include playground activity in their calculations.

Despite the fact that third graders knew that each day lasted the same amount of minutes and hours as every other, some school days went faster or slower than others. Some days were busier than others, too. Although not all busy days were the result of what seemed an overload of work, at least once a week a busy day turned up largely because of the teachers' decisions about assignments for that day. However, no single day of the week was always busy. Also, just because one student was having a busy day did not mean that all students were having one that day. Reading and mathematics were the subjects that primarily determined whether or not a day was busy. Busy days and boredom were not mutually exclusive. Either hard work or having nothing to do could lead to boredom.

There was no clear preference for the morning or afternoon in school either among third graders as a whole or by unit or sex. Yet the explanation as to why morning or afternoon was chosen as the preferred part of the day was based on the child's perception that it was the more interesting, faster moving part of the day.

Third graders were specific about the time of day that was most appealing to then. Their favorite times were those that required the least supervision from adults. Any subject or portion of the day that was deemed by an individual third grader as providing an opportunity for fun, novelty, and/or swift completion of new assignments was the part of the day to which s/he looked forward.

With the exception of the lower ability girls (in both the intermediate and primary units), third graders felt they had enough time to do their assignments. This perception of having enough time did not mean that students always finished work by deadlines; rather, it indicates that deadlines were flexible or that extra time could be obtained from recess, tomorrow, and at-home time to finish the work. Teachers were regarded as benevolent in doling out quantities of time. The very few students who felt they had too much schoolwork to do felt this way only about a single subject or about an occasional day.

The necessity of having homework was an individual matter. Mathematics and reading were the subjects most likely to create homework for intermediate and primary third graders, respectively. On the other hand, if third graders finished their assignments early, free time resulted. A trip to the IMC was the favorite use of free time.

Regardless of ability level, these third graders expressed no hostility toward school. Learning new things was the major attraction of school for the children. What they did not like about about school was related to either having too much time or not enough time in a subject or to the limited amount of freedom they were allowed by the activities in a particular subject.

Third graders rarely expressed a desire to make changes in their schedules or the school. Suggested changes in scheduling involved shortening least liked classes (but not necessarily the longest classes) and lengthening favorite classes (but not necessarily the shortest classes). Teachers were assumed to know best and to be the adults in charge of students' schedules. This was not seen as the principal's responsibility. Substitute teachers were not appreciated by students mainly because they always altered the schedule and routine that students were used to.

Because they did not have to control their use of time in school, third graders rarely wore watches to school although most children owned one. Students did look at school clocks, but they were not always easy to see. Furthermore, no one ever pointed out to the teacher what time it was or checked her accuracy about the number of minutes left in class. Watches and clocks were still just parts of their environment, and they were not considered a source of data to be used in controlling this environment or their own or someone else's actions.

Discussion

Related research. These findings both support and contradict previous research on children's understanding of time. The perception of time among third graders who were closest to the mean in achievement, IQ, and off-task time tended to support the position (Piaget, 1937, 1946; Pistor, 1939, 1940; Ames, 1946; Levin, 1946; and Bradley, 1947) that there are sequential, maturational stages linked to particular chronological ages in the development of time understanding in children. These findings also support Meylan-Back's (1946) work demonstrating that children at 8 years of age are changing from perceiving a time interval as longer than it actually is when more changing events took place to perceiving the interval as shorter than it actually is when the number of events occurring in the interval was increased.

However, the children who were furthest from the mean in either direction displayed idiosyncratic understandings of time. The findings of this study tend to support both Harrison's (1934) contention that mental age and experience are more important determiners than is chronological age in time perceptions and Springer's (1952) research showing marked differences among children's understanding of time. This finding contradicts Tom's (1966) conclusion that children's understanding of the notion of time was more related to age than to intellectual ability.

Lessing's (1968) finding that longer future perspective was associated with higher intelligence scores and higher academic achievement is supported by the results of this study.

Of additional importance, these research results tend to confirm Crowder and Hohle's (1970) conclusion that a child is capable of discriminating time intervals before he can identify them verbally. Nevertheless, children's conception of time remains shaky enough at this age to be vulnerable to counter suggestions from various factors such as spatial variables, as Levin's (1977) model predicted.

Practical implications. A number of practical implications may be derived from this research for both the use of children's school time and for promoting the development of their understanding of time. One of the most important is that the student's perception of time duration has significance for class length. Since third graders of low ability (and therefore a less developed sense of time) are likely to perceive a number of changing events within a given interval as making the interval seem longer, a different approach to structuring their day should be used so that they do not feel overburdened. This consideration is of less importance for third graders of average and high ability, who are beginning to believe that more events make the time interval seem shorter. In fact, it would be advantageous to offer them a wider variety of activities.

Because most third graders do not have a well-developed future time sense, the monotonous routine of the school day and year are still quite tolerable to them. Third graders still believe adults know best and that they, as children, have virtually no control over school-related learning activities. Thus, they accept the school schedule without dispute. Nevertheless, it is also important that the school routine be varied a bit each week to give the children a sense not only of time passing but of accomplishment. The findings of this research also suggest that at least two weeks are needed at the beginning of the school year before third graders feel oriented to their new schedule and teachers should keep this in mind in planning activities during that period. Since no marked preference for either morning or afternoon was expressed by most third graders, it would appear that time of day is not an especially important consideration in deciding when a particular subject should be taught.

These findings do raise the question of whether children who have no sense of control over their time in school, and yet are expected to finish work by certain daily or weekly deadlines, will actually be motivated to do so. Increasing the amount of teaching of time concepts to the slower students may be beneficial to their work pace. Lower ability students who seem to have difficulty expressing themselves verbally about their understanding of time might also benefit from additional learning experiences designed to help them understand time and to develop a vocabulary appropriate to talking about time.

Actually, all third graders probably could benefit from a greater sense of control over their time. If they could exercise more control over their time, they should be able to exercise more control over their learning which, in turn, would lead to a greater sense of self-responsibility. Those children who had reasons--such as extracurricular activities or special classes to attend--to develop a more mature sense of time tended to do so.

If children are not allowed control of their use of school time, the teacher should at least provide a nonpressurized atmosphere and flexible deadlines. It is largely teachers' decisions which create the sensation of busyness and/or boredom for children during a particular school day and persistent experiences of this sort tend to accumulate over time. The result is that children develop either a positive or negative outlook on school which inevitably affects their later work habits.

An additional implication of this study is that despite tendencies among third graders to have certain generally similar understandings of time, they expressed enough idiosyncratic notions about time that the teachers and administrators should not assume all third graders are having the same experience in school simply because their schedules are similar. For example, behavior problems may be the result of students' differing perceptions of how fast time is passing.

This study indicated that many students would like to have more nonprogrammed time and would be able to utilize it constructively to provide learning experiences for themselves. A strong indication that these students were capable of using free time wisely is that most of them expressed a desire for more opportunities to use the IMC.

Additional exploratory and open-ended uses of the free time that does exist should be provided for these students, especially for those who need more incentive to utilize their free time for learning. On the other hand, all students should not be required to use their free time in the same way.

Research implications. Further research is necessary to determine whether additional instruction in time concepts and related time vocabulary would improve the self-concepts and sense of control over their environment of low-ability third graders and lead to improved achievement on their part.

Additional research might also examine the changes that occur in these children's perception of time as they grow older and, in turn, how changes in these understandings of time affect their school experience and the organization and operation of the school.

Friends and School Time

Although third graders generally were friendly to all other third graders, definite friendship groups had developed among them. Most of them believed there was enough time to talk to their friends each day at school. The existence of friendships was an essential part of making the school year good or bad.

Friendships were related to the sex and ability level of the students involved. Students in the primary third grade tended to have fewer friends than those in the intermediate unit. Close friendships seldom crossed unit lines, and when they did they involved a student who, according to achievement test scores, would have been better placed in the other unit. Friendships rarely crossed sex lines. Differences in chronological age had no discernible effect on the formation of friendships among third graders, although they had few close friendship ties with either older or younger students in other grades.

The most popular boy in each unit was a child whose achievement and IQ scores were very close to the mean for third graders and whose amount of off-task time closely approximated the mean for his sex in either the intermediate or primary unit. The same was true for the most popular intermediate girl and her relation to the test scores and off-task time of intermediate girls. However, in the primary unit, the most popular girl had scores below the mean as well as the lowest off-task time for primary girls.

Third graders in both units tended to believe that they worked at the same speed as their friends. Whether a student worked at the same speed as his/her friends could have an effect on free time which, in turn, permitted activities that might involve partners.

Discussion

Practical implications. These findings suggest that, in practice, student relationships should be considered as possible means to increasing student achievement and work speed, and as an important element in the success of certain types of lesson plans and classroom organization strategies.

If lower ability students had more opportunity to cooperate with higher ability students in class as a means of finishing their work, the pace of the slower children could be increased, especially if they were helped by those who had already finished the assignment. This might increase the sense of group belongingness that many of these slower children apparently lack and might alleviate some of the inherent separation between ability levels in developing friendships. It might also provide constructive activities for faster-working students when they finish assignments. The lower ability children seemed to suffer from a sense of isolation because often their slower work speed carries over into their pattern of social relationships.

The tendency for children to form friendships which reflect similarities in achievement and ability level suggests that if students are to be ability grouped, and it is unclear in which group a borderline student belongs, it might be helpful to identify his/her friendship ties and consider whether these existing friendships are beneficial to the child in order to determine the group in which the child would fit best. Administrators and teachers must also consider whether strict ability grouping is desirable and whether more opportunities should be provided for third graders of all abilities to mix together to foster the development of friendship and understanding among them.

The link between time use and friendships also is relevant to classroom management and instruction. When lesson plans require students to work with unassigned partners, students who work at similar speeds and who are friends tend to choose each other as partners. Students who work much faster or slower than the class norm are at a disadvantage and may spend much time trying to locate a partner before even beginning the task.

Extreme variations in time use, e.g., being too on-task or too off-task, tend to be exhibited by children who have no close friends. Students who are extremely off-task might present fewer discipline problems if they had friends. If socialization can be combined with learning in the lesson plans, it might lead to a reduction in off-task behavior on the part of isolates, who might develop friends in a legitimate manner if provided the opportunity. They might then be less inclined toward off-task behavior, e.g., watching or trying to attract the attention of other students during class.

Research implications. Further specific research is necessary to verify the link between friendship patterns and time use and its potential effects on achievement and amount of on- and off-task time of students. Ethnographic research would be especially useful to ascertain the ramifications and implications for school and classroom organization of this link.

A Final Word

The value of using ethnographic research methodology was demonstrated in this study of third graders' use and perception of school time. This approach to studying not only what is currently going on in schools but how the participants themselves--the students--perceive the use of their time in school is extremely helpful for identifying ways to improve the organization and administration of schools and the learning taking place in them.

The use of ethnography to gather the data and formulate the findings reported in this study suggests that ethnography could and should be used more widely in the study of human behavior in schools. It is evident from the results of this research that students are a valuable source of information for determining what is actually happening inside the school. Even students as young as third graders have ideas that could lead to improved learning conditions in schools.

If students are to achieve their potential, it appears that they should exercise more control over their learning environment, including their use of time. This study demonstrated that most third graders are capable of accepting more responsibility than they typically are given for their use of time in school, and that their achievement level and motivation to achieve are likely to improve if they are given such responsibility. The organizational controls over time use in this school sometimes tended to hinder rather than facilitate learning.

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APPENDIX A

PARENTAL CONSENT FORM

Student Name: ________________________________

Wisconsin Research and Development Center
for Individualized Schooling

SCHOOL RESOURCE UTILIZATION STUDY

Parental Consent Form

The study in which you and your child are invited and requested to participate is designed to examine the ways in which a variety of resources, such as money and time, are used in the educational process and how various resources affect the progress of individual students. The study will cover a three-year time period. Students who are in the third grade during the 1979-80 school year will be the focus of the study, which will be completed during your child's fifth grade year. In conducting the study, the researchers will observe students in school, review pertinent school records, and interview selected teachers and parents.

All participants will remain anonymous, and no individual or school will be identified in any reports of the research.

Any questions you may have concerning the procedures to be used in the study will be answered. You are free to withdraw your consent and discontinue participation in the study at any time.

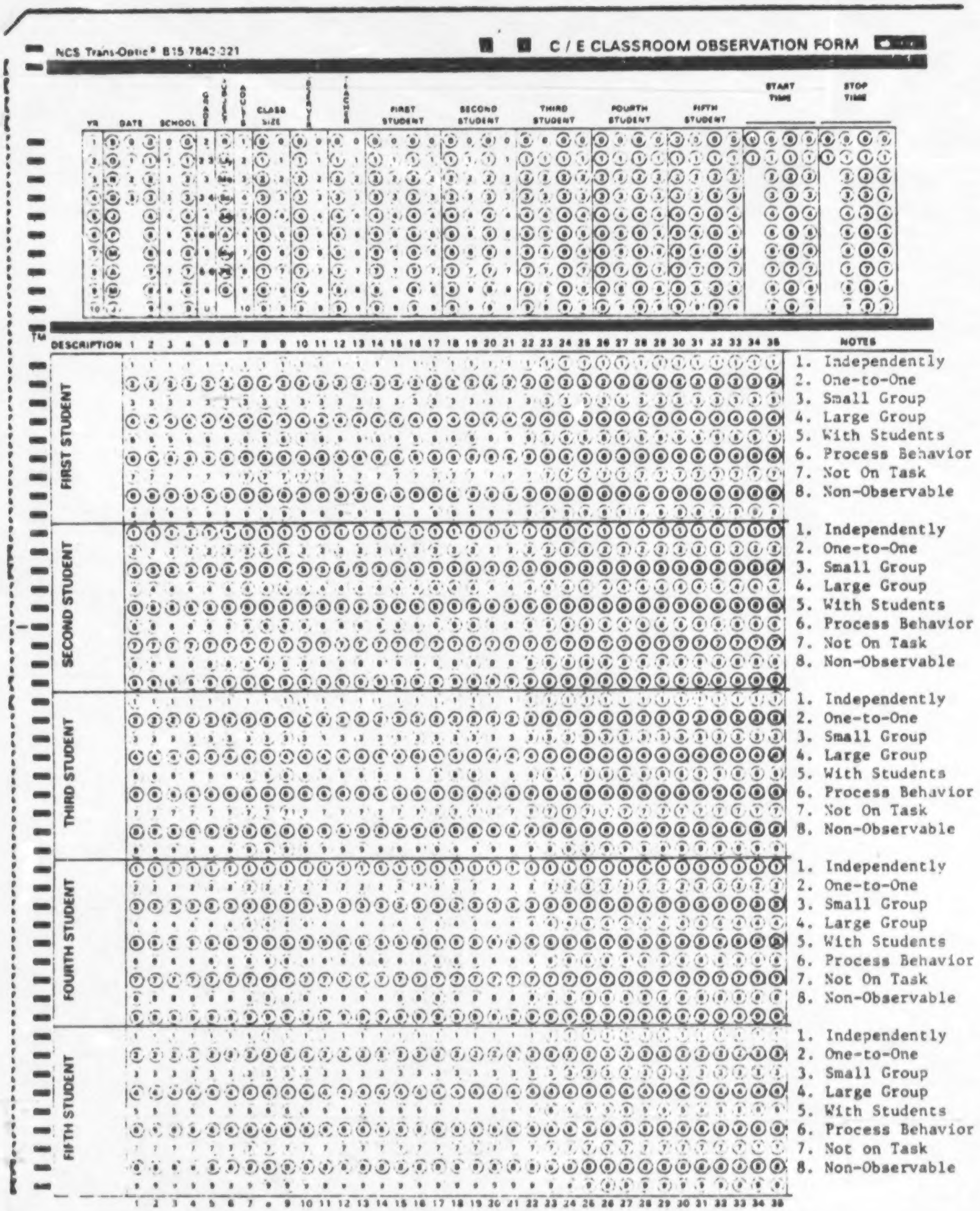
Please sign below to indicate your consent to participate in the study and return this form in the enclosed envelope. Thank you for your willingness to participate.

____________________________________ Parent or Guardian

__________________ Date

APPENDIX B

OBSERVATION FORM



NCS Trans-Optic® B15 7842-321

C / E CLASSROOM OBSERVATION FORM

YR
DATE
SCHOOL
CLASS SIZE
FIRST STUDENT
SECOND STUDENT
THIRD STUDENT
FOURTH STUDENT
FIFTH STUDENT
START TIME
STOP TIME
DESCRIPTION
NOTES
FIRST STUDENT
SECOND STUDENT
THIRD STUDENT
FOURTH STUDENT
FIFTH STUDENT
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

1. Independently
2. One-to-One
3. Small Group
4. Large Group
5. With Students
6. Process Behavior
7. Not On Task
8. Non-Observable

1. Independently
2. One-to-One
3. Small Group
4. Large Group
5. With Students
6. Process Behavior
7. Not On Task
8. Non-Observable

1. Independently
2. One-to-One
3. Small Group
4. Large Group
5. With Students
6. Process Behavior
7. Not On Task
8. Non-Observable

1. Independently
2. One-to-One
3. Small Group
4. Large Group
5. With Students
6. Process Behavior
7. Not On Task
8. Non-Observable

1. Independently
2. One-to-One
3. Small Group
4. Large Group
5. With Students
6. Process Behavior
7. Not on Task
8. Non-Observable

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